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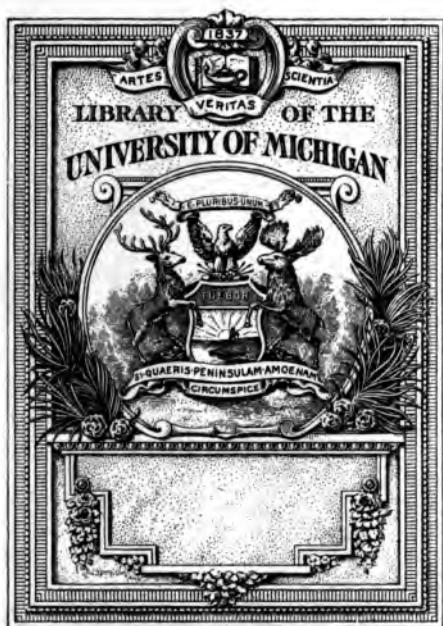
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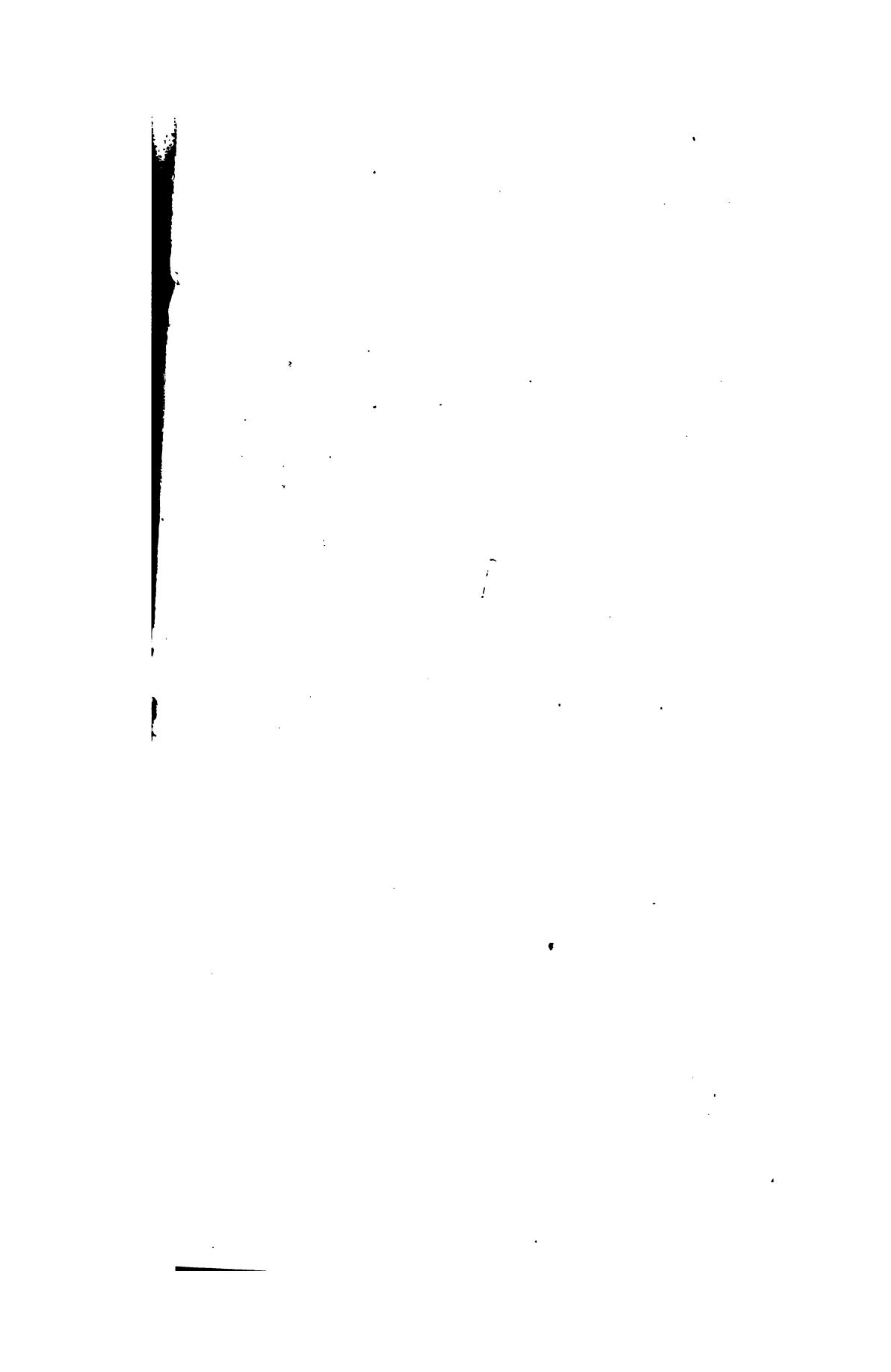
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THE

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JOHN J. MULHERON, M. D.



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THE
PENINSULAR JOURNAL
OF MEDICINE.

JANUARY, 1876.

Original Communications.

A CLINICAL LECTURE ON PARESIS, OR FAILURE OF MUSCULAR POWER. Delivered December 22, 1875, at the State Hospital, connected with the Department of Medicine and Surgery, of the University of Michigan, by A. B. PALMER, M. D., Professor of Pathology and Practice of Medicine.

GENTLEMEN—Since commencing this course of clinical lectures seven cases have presented themselves where a loss of muscular power in a greater or less number of parts of the body, and with greater or less completeness, was among the prominent symptoms.

Case 1, was that of A. B., a farmer from Wayne Co., aged 66 years, who had had two years ago, as he said "spinal meningitis," from which, or its effects, he had not completely recovered. Two months before he visited us he was attacked with hemorrhage from the stomach, vomiting blood several times in free quantity, from which he was so much reduced in general strength that he was confined to his bed for some time, but at length was able to be up a part of the time. One week before

we saw him here, there was marked loss of power in his lower extremities, together with some impairment of sensation, notwithstanding his general strength had improved; and this paresis was so great that he could with difficulty stand, and with more difficulty walk. He was exceedingly pale—the prolabia colorless and his ears bloodless, indicating extreme anæmia. You will remember I attributed this loss of power in the muscles of his lower limbs (more likely to occur here than elsewhere from this cause) chiefly to the loss of blood and the consequent anæmia; this effect being influenced by the patient's age, and probably also by impairment of the spinal cord by the meningeal inflammation two years before. [REDACTED] We found no clear evidence of present organic disease of the stomach, though the hemorrhage suggested cancer or ulcer. And you will recollect that he was directed to take a nourishing diet, easily digested; to dress warmly, and to take a drachm of the elixir of the phosphate of iron, quinine and strychnine, three times a day.

Case 2, was that of a young man who had suffered from paralysis of one lower extremity from his infancy. He was examined hastily. But little encouragement could be given as to the results of treatment. We did not see him a second time, and I have not preserved any notes of the case.

Such cases are sufficiently common. The original lesion in the nerve centre is often beyond the reach of remedies, and when continuing so long as in this case, the muscles become wasted or are undeveloped, are often degenerated and contracted and the restoration to a healthy state is out of the question.

Case 3, was that of L. D. S., of Calhoun Co.; a farmer, married, age 38.

He reported himself as having had "enlargement of the liver" fifteen years ago, and "typhoid fever" nine years ago, since which his health has been seriously impaired. You will remember our inquiry as to the particular symptoms of this "fever" did not make clear the correctness of that diagnosis, as he could not remember that he then had diarrhoea, distension of the abdomen, deafness or nose-bleed, and his hair did not fall out afterwards. Since that sickness, whatever it was, he had

suffered from what he called "rheumatism" in his lower limbs, hips and back; he walked with great difficulty and by the aid of a cane; the muscles of his limbs were much wasted; but the history and present appearances indicated sciatica rather than rheumatism, this having become chronic, resulting in the loss of power from impairment of nerves and muscles.

You will remember his countenance and whole appearance indicated great debility and depression; that notwithstanding his general anaemia his tongue was red and glossy; that he was directed to discontinue the whisky which he had been taking in regular, but not what is usually considered excessive quantities—only in such cases as had been prescribed for him by a physician as a "tonic;" that he was directed to take the elixir of phosph. of iron, quinine and strychnine, and that he appeared in four weeks after, looking and feeling much better, his color having improving decidedly, his pain diminished and his power of locomotion moderately increased. He was advised to continue the former prescription and to visit us again.

Case 4, was that of D. S., age 60, cabinet maker; of short stature, of correct habits with the exception of the free use of tobacco, and a not altogether moderate use of coffee and tea.

Six weeks before his appearance at the clinic, after a breakfast which was freer and more enjoyed than usual, he was taken suddenly with a severe pain in the head, but went to his business, when in an hour or so after, he fell from his chair and was brought home insensible, with a flushed face and slow, laboring pulse. He gradually returned to consciousness, but was drowsy and confused in mind, and was soon discovered to have partially lost the power of his left side. Since then he had been gradually improving, his mind becoming more clear, and the "weakness," as he expressed it, of the left side diminishing.

The diagnosis which many of you attempted to make, with varying success, was decided to be cerebral hemorrhage—the partial hemiplegia being a result of that pathological lesion. This opinion was strengthened by finding the heart hypertrophied, though without apparent valvular lesions—for in this condition the blood is more likely to be thrown to the head with sufficient force to rupture weakened vessels.

He was prescribed iodide of potassium in five grain doses three times a day, with a view of promoting the absorption of the clot and inflammatory exudates about it, which condition was presumed to be present. At subsequent visits his symptoms were found to be gradually abating. Care and moderation were enjoined, as in such cases there is a liability to subsequent attacks.

Case 5, was that of S. T., farmer, age 73. For the last sixteen years this patient has been unable to work, and has walked with a crutch or cane. He had at first suffered much pain, and since at different times, with feelings of numbness, though having but little pain now and for months past. A variety of treatment had been used at different times, including galvanism, with but little apparent effect.

The history and present condition justified the diagnosis of sciatica and its results, rheumatism and rheumatoid arthritis being excluded. As Mr. T.'s general health was good, the pain in his limbs not now considerable, though there were some disagreeable, numb sensations, especially in one heel, but all being the result of former rather than present active diseased processes, age now adding its influence to the other conditions; hygienic measures without medicines were advised.

Case 6. Mrs. P., widow, age 55, from Davisburg, Michigan. This lady had never been very strong. When she was nineteen years old she had "brain fever," which affected her severely. Her speech and movements were impaired, and her memory so affected that she was obliged to learn to read and write a second time, and she has never since had complete control over her muscles, the left side being more affected than the right. During the last few weeks her symptoms have become markedly more severe. Her speech is thick and the loss of power in her hands has been progressing. She was accompanied by her physician, who had been in charge of her case only since the recent advancement of her symptoms had occurred, and who had prescribed some alteratives and tonics.

The diagnosis was impairment of brain and nerve tissue, especially of the motor tract by the inflammation thirty-six years

ago, now added to by the failure of nutrient and general power as age advances. She was advised iodide of potassium in five grain doses, three times a day for a few weeks, and then the trial of tonics; regulating the general functions, and meeting any other conditions which may require correcting. The prognosis could not be considered encouraging, as too cure, though some improvement is possible.

Case 7. George C., a farmer, age 61; residence, Vermontville, Michigan. The constitution and general health of this gentleman have been good, his habits correct; rather robust in size and form. He "strained" himself by lifting, some sixteen years ago, but recovered completely in the course of two years. In his younger days he had occasional "blind spells," followed by severe headache, etc., (probably migraine), but has had nothing of this for years past. This patient was brought from the hospital into the amphitheatre with his bed, upon a stretcher, he being entirely helpless, the muscles of the upper and lower extremities being alike affected, though, as you saw, he could draw up feebly his left leg and could raise his left hand nearly to his head. You noticed that the little finger of each hand was rigidly flexed, that each forearm was held quite firmly at about a right angle with the arm, that the wrists were stiff, and that passively bending any of these parts produced pain. The lower limbs, though no more under the control of the will than the upper, have not this rigidity—the muscles being flabby and relaxed. The tongue was protruded readily and in a direct line; the voice was unimpaired, the intelligence perfect, the face symmetrical; mastication and digestion were uninjured so far as muscular action was concerned; in short, all the parts supplied by nerves directly from the brain retained their functions, while all those supplied by nerves from below the cervical vertebræ had their motor functions greatly impaired or entirely lost. The motion of the diaphragm and other respiratory muscles was comparatively intact, as the nervous supply of these muscles is not so dependent upon the spinal cord. The patient informed us that he had occasional chills followed by flushes of fever. His pulse, when he was quiet, was 70; respiration about normal in fre-

quency, though he had a feeling of stricture about the chest, especially on the right side, and he had an occasional hacking cough, raising from time to time a little thin mucus. On inquiry we found his appetite was good, his food not distressing him, but his bowels costive, requiring cathartics to cause a movement. His urine he now passes frequently; it is often offensive in odor and loaded with mucus. We also found that his tactile sensibility was not entirely natural, it was quite acute—hyperæsthetic—the slightest touch was perceptible and often painful or tingling. The temperature of the paralyzed parts was not far from normal, and the thermometer under the tongue stood at 99.5 deg. These were the leading conditions as we observed them on our first examination, December 18, 1875. On the 19th I examined his lungs by percussion and auscultation—found slight dullness on the posterior part, a little more of the right than the left lung, and at the point of most dullness there was feebleness and some rudeness of the respiratory murmur. These signs afforded evidence of some congestion, probably hypostatic, from lying so constantly upon the back.

I now ask your attention to the history of this case, and to an explanation of the phenomena observed.

On the 10th of July last, five months and eight days before our examination, Mr. C. fell backward by the turning of a stick of timber on which he was standing, seven or eight feet above the ground, and struck upon a comparatively smooth but hard surface, the part first coming in contact with the ground being the lower part of the neck or upper part of the shoulders. He remembers distinctly when he was falling, showing that the fall was from the rolling of the timber and not from any stroke or seizure; and doubtless he instinctively bent his head forward to save it from injury, the blow being received on the back of the neck and shoulders. After the fall he remained unconscious for four weeks, when his mind gradually cleared up, his condition not materially changing since that time. While unconscious his urine was drawn off with a catheter, and for some time after that it dribbled away constantly, but for the last few weeks it has passed frequently but is controlled. He has but little pain in

any part, but the right shoulder is sensitive and sometimes moderately painful. When the chills occur they are accompanied with sensations of numbness in different parts of the body. These are the principal phenomena attending this interesting case, and we have brought them out so fully because they all aid in coming to conclusions respecting the pathological conditions present, and may afford indications for treatment. Of course there can be no doubt but that the injury inflicted by the fall is the cause of the paralysis. What was the seat and nature of that injury? There is no evidence of fracture or displacement of the vertebrae and pressure upon the cord by the bones. The first effect produced was probably severe concussion not only of the cord but of the brain as well. The immediate unconsciousness would indicate that. But whatever injury to the brain was produced has been repaired—at least for the most part, as no brain symptoms are now present. But more serious injury was done to the spinal cord at the point where the blow was inflicted. Whatever it was, it affected the motor more than the sensitive tract, and the right side somewhat more than the left. Whether there was any actual solution of continuity of the matter of the cord, it may be difficult to say; or whether there was any rupture of vessels and hemorrhage causing pressure. But whatever the first lesion, inflammation undoubtedly followed, and that inflammation has not entirely disappeared, and its results, I fear, will not be readily overcome. There may be inflammatory softening, there may be plastic exudates and hardening, there may be effusions, or thickening of the meninges and pressure upon the cord in its narrow canal, or there may be proliferation of connective tissue at the expense of the cells and conducting fibres of the cord, thus interfering with their functions. There is irritation at the point designated—in that part of the cord giving origin to the nerves of the upper extremities, causing the rigidity of the muscles, and there is interruption of the conducting power of that part of the cord causing the functional loss in the muscles below.

With this view of the subject the leading present indication is to overcome the inflammation still going on and remove its ef-

fects. The stimulus of electricity applied to the part would, I think, be more likely to increase than diminish the inflammatory process, and it would be of little use as applied to the nerves and muscles in the more remote parts,—would at present, I fear, be worse than useless. The time may come when this agent in this case may be of great service, but I choose to dispense with it at present.

I have advised the following treatment :

R Ext. Belladonna..... gr. ss
Powd. Ergot..... grs. iv
Iodide of Potassium..... grs. v
M. To be repeated three times a day.

I have directed that he lie upon his side as much as possible, or sit up as he may be able ; that his bowels be kept soluble by a laxative pill, and that ice bags be applied to the spine in the region of the injury, kept on two hours at a time at first, and we shall judge of the propriety and time of their repetition and continuance by the effects produced. We shall give attention to the condition of the bladder, washing it out as may be necessary, as you have seen me do to-day. Shall take care that bed sores do not occur, and watch carefully all the conditions, being governed in the future by the indications presented.

These cases thus reviewed, and especially this last one, you can but see have much practical interest ; and I propose to make them the starting point of a future lecture, or of lectures upon the pathology, diagnosis and treatment of paralysis. A few cases thoroughly studied, considered in all their bearings and relations, will be more valuable to you, than many cases superficially discussed, and I intend to make the last case particularly, the subject of future remarks.

*"BAVARIAN SPLINT," MODIFIED. By R. J. PEARCE, M. D.,
House Surgeon, Michigan University Hospital.*

It must be the experience of surgeons who have been in the habit of using the splint known by the above name, that it is very difficult to make properly, owing to the fact that the flowing

plaster gravitates to the most dependent part of the layers of cotton which surround the limb, and between which the plaster is poured. Thus the plaster is not under the control of the surgeon and cannot be manipulated as desired by him. Again, it is heavier than need be and burdensome to the wearer, and lastly, it is not durable. These objections I have sought to obviate by making the splint as follows: First, cut a piece of strong factory cotton long enough to envelop the portion of the limb to be supported, and have three inches to spare; also allow for a margin of one and a half inches, at what will be the upper and lower edge of the splint. Next, cut strips of the same material two inches wide and of such length as to fit between margins mentioned. Now pin on smoothly and tightly the first piece of cotton spoken of, dividing the surplus three inches equally between the two sides. The plaster is now mixed and when in proper condition to set, saturate with it separately and quickly each of the strips that have been cut and (carrying with them all the plaster that will adhere) apply them lengthwise between the top and bottom margins before described, till the desired thickness has been attained. Four layers of this kind will be found strong enough for any ordinary purpose. Opposite to the line of pinning should be left a space of cotton free from these layers, to act as joint to the splint, or better, to cut down through the middle and paste over its adjacent edges. All that now remains to be done is to turn over the margins at top and bottom of splint, and the surplus one-and-half inch left free along the line of pinning upon the plaster, before it dries, for the purpose of protecting and strengthening the edges. The splint must harden and be removed before remaining margin can be covered.

It may be seen from these details that the splint may be increased in thickness at whatever point strength is most required; that the gravitation of the plaster is wholly overcome by the inlaid strips; that its strength and durability are thereby also increased, while its bulk is diminished; that its edges are protected from crumbling by the overturned margins, and that, when skilfully made, it is compact in form and slight in appearance.

Such a splint will last many weeks, while but a short time is sufficient to wear one out when made in the usual way.

A CASE OF "SYME'S OPERATION" FOR DISEASE OF THE ANKLE-JOINT—RECOVERY. Reported to the Washtenaw County Medical Society. By DONALD MACLEAN, M. D., Prof. of Surgery, University of Michigan.

On the 20th Nov. last I was consulted by Mrs. S J. H. (from Sibley, Osceola Co., Iowa), in reference to disease of her right heel and ankle-joint, of which she gave the following history:

Patient is 28 years of age, married, had always enjoyed good health until the spring of 1869, at which time she sprained her right foot slightly in the act of kicking. After this trivial accident a slight pain continued in the neighborhood of the heel, but for two months was regarded with indifference. It then became more serious and patient described it as a dull and heavy pain, aggravated at night, to such an extent as to prevent sleep. Hot applications were resorted to and afforded some relief.

No external manifestations of disease were detected until two months later, when a swelling began to appear on the outer side of the heel. This swelling gradually increased and the skin became discolored over it. An incision was made into this swelling, and some blood escaped, and after a time, pus.

In August, 1869, patient consulted Dr. Henley, of Tabor, Iowa, who made a free incision down to the os calcis, which she says he found roughened and presenting two depressions, the result of ulceration. The doctor endeavored to afford relief by removing with a gouge, all the diseased portion of the bone.

From this treatment no permanent benefit resulted, so that in a short time, patient says she was in a worse state than she was before.

From this time until December, 1871, the disease made steady progress in spite of the repeated efforts of a variety of "Specific Doctors," "Cancer," "Herb," "Botanic," "Homæopathic," etc., etc. At the date just referred to she applied to Dr. Gott, of Virogna, Wis., and he at once advised amputation of the foot, but at the patient's urgent entreaty, he made an effort to avoid this extreme measure, and removed only the carious portion of bone by the chisel and gouge.

From this operation patient says she derived some temporary

benefit; the pain diminished very much, and the foetid odor of the discharge disappeared, but the wound did not heal, nor the discharge cease, nor the general health improve. After being under Dr. Gott's care, for two and a half months, she returned to her home in Iowa, and eschewing the profession, betook herself to patent remedies of many different kinds, some of which she swallowed and others she applied externally with the result which might have been foreseen, viz: that the old condition of the foot gradually returned, and her general health became seriously impaired. A traveling agent of the so-called Surgical Institute of Indianapolis, persuaded the patient to resort to that *miraculous* (!) establishment for advice and treatment, and thither she went early in November, and was promised *a cure by excision of the diseased bone (the os calcis)*. Mrs. H. and her husband who accompanied her, having at last learned to recognize quacks and impostors, promptly declined the services proffered by the gentlemen of *the institute*, and were advised to come here.

On examination, the following state of the case was discovered: Patient very thin, sallow and cadaverous looking, with the characteristic symptoms of hectic fever. The dorsum of the foot was swollen over the whole of the tarsal region, and to the touch gave the peculiar sensation of gelatinous degeneration of the synovial membranes.

On the outside of the heel there was an indolent ulcer two inches in length, from which there issued a copious discharge of extremely foetid pus. The surrounding tissues were cartilaginous and unyielding.

The patient was unable to place the slightest weight on the foot and for many months had gone either upon crutches or her knees, and she complained of almost constant pain in the ankle-joint and through the posterior part of the foot.

The probe passed at once into a rough irregular cavity in the *os calcis*. The patient declared herself willing to submit to anything that held out a fair prospect of permanent relief, and was strongly opposed to further partial or palliative treatment.

Syme's ankle-joint amputation was unhesitatingly recommend-

ed and was at once agreed to by the patient, and on the 23d of November, with the assistance of my colleague, Prof. Frothingham, I performed the operation in the usual way. An unusual amount of difficulty was met with in dissecting the heel-flap, owing to the rough and scooped-out condition of the os calcis, and owing to the unnatural condition of the soft tissues, the result of the long standing disease. The utmost care was taken to avoid injury to the internal calcaneal and other arterial branches distributed to the heel, and that these precautions were successful, was agreeably demonstrated, on the removal of Esmarch's bandage, after the completion of the operation, for arterial blood was at once seen to ooze from the very lowest extremity of the long flap.

On sawing off the articular surfaces from the tibia and fibula, a dark, grumous fluid was seen to ooze from the cancellated tissue, a phenomenon which excited some unpleasant apprehensions of future trouble from that quarter. These apprehensions, however, were destined to prove groundless.

The flaps were brought together with silk sutures and supported by a pad of lint and a bandage, and in short, this, with a tepid water bath morning and evening, and the additional support of an adhesive strap, constituted the whole after treatment. Any serious oozing or suppuration which occurred within the stump was already thoroughly provided for by the opening in the posterior part of the flap formed by the old ulcer. Had this opening not pre-existed, an artificial one would have been made.

In a week from the date of operation all the ligatures and sutures had been removed, the discharge had lost its foetid penetrating odor and became quite laudable and comparatively small in quantity.

The patient's general condition also improved very rapidly, so that on the 23d of December, just one month from the day of operation, she was able to leave for her home in the far West, with her health quite restored, her painful and disgusting local affection entirely removed, the wound of the operation healed, and a stump on which, even at that early date, she was able

almost to bear *one-half* the weight of the body. The difference in the length of her two limbs was not over one inch.

On submitting the amputated foot to careful examination, the *os calcis*, the *synovial membrane* of all the *tarsal articulations* was thickened and gelatinous, and the *cartilages* of most of the joints more or less ulcerated.

In looking back over the history of this case, we have no hesitation in saying, that, treatment at the proper time, by *plaster of Paris* cast, either alone, or combined with the actual cautery, would in all probability have led to a very much earlier and more satisfactory result.

For the notes of this case I am indebted to my student, Mr. •
W. R. Birdsall.

MEDULLARY SARCOMA—DEATH—POST MORTEM. *Reported*
to the Wayne County Medical Society, by THEODORE F. KERR, M. D.,
Detroit, Mich.

On the 11th of December, 1875, Dr. James F. Encke, of this city, requested me to see a patient of his of whom he gave the following history :

Mr. C. was a Scotchman, forty-eight years old, and a painter by trade. He had always enjoyed good health until about six months ago, when he was attacked with vomiting one day after he had been engaged in boiling some "paint skins." Since then his health had been poor though he had always worked when he had work to do. During the latter part of the summer he had an attack of what he called bloody dysentery, but no physician attended him at that time. Subsequently, at times, there was severe constipation and likewise colicky pains, though these were not related as cause and effect in his mind. Several weeks before the date given above, he had called on Dr. Encke, who treated him for lead poisoning, the symptoms of which were plainly exhibited in the dark line along the edge of the gums. A cyanotic condition of the nails and fingers, the constipation and pain, not severe, in the region of the umbilicus were ascribed to the same cause. The bowels were first acted upon by strong

cathartics, of which large doses were required, and iodide of potassium was given. Under this treatment he rapidly improved, so that within ten days the discoloration of the gums had entirely disappeared and the patient felt better. Three weeks before I saw him the patient took to his bed complaining of some pain in the bowels, a general weakness and debility, but chiefly of exudations of gas from the stomach and vomiting of bilious matters. For these symptoms tonics and anti-dyspeptic remedies were prescribed, but without satisfactory results. Sometime during the last week in November, the patient first called the attention of his physician to the condition of his abdomen, which was then for the first time examined, and a large tumor discovered. The patient was restless and opium was prescribed, one grain every three hours, which he had taken ever since. Within the last ten days there had been several discharges from the bowels, which the doctor had not seen, but from the description thought they were mostly blood. He had ordered the last one kept, which we could see this morning.

On reaching the house we were shown a chamber vessel about half filled with a thick, semi-fluid, bloody discharge, of an extremely offensive smell. This had been discharged from the bowels since seven A. M., in two motions. A physical examination of the patient showed the veins on the surface of the abdomen largely distended, indicating some marked obstruction to the portal circulation. The abdomen was also distended in the umbilical region, the enlargement reaching into the right lumbar region and below into the hypogastric. By the hand the full, rounded border of the tumor could be distinctly outlined on the upper and right sides, but it gradually became ill-defined and seemed to lie deeper in the abdomen on the left and lower sides. It was of quite firm feel, almost solid, and seemed to be adherent to the anterior wall of the abdomen. Percussion gave a deep tympanitic note. The examination caused no pain of any note. The opinion was expressed that the growth was a malignant one, probably of the medullary or encephaloid type; that ulceration had taken place and that a fatal haemorrhage was liable to take

place at any moment. Dr. Encke fully concurred in these views.

The prognosis was verified by the death of the patient on the evening of the 14th of December, immediately after a copious discharge of blood from the rectum, and the post-mortem examination, which was made sixteen hours afterward. On cutting through the abdominal wall the tumor was reached directly and found adherent over a space about as large as the back of the hand. The whole of the small intestine and the colon presented the black color of partial decomposition. The stomach and rectum were normal in appearance. The mesentery was wholly infiltrated with the new growth so as entirely to displace the original tissue and was much enlarged. The mass was much decomposed and was inseparably connected to a loop of the small intestine about a foot and a half in length into which it had opened by extensive ulceration, forming a cavity that would hold a pint. Along the spinal column was a considerable section which had not suffered degenerative change, and on cutting into this it presented the gross appearances of the true medullary cancer. The entire mass when removed and cleaned weighed five pounds. Around the left common iliac artery just at its point of bifurcation, lay another tumor about the size of a turkey's egg. This was encapsulated but suppuration had taken place and the scrotum was half full of pus, the inguinal ring being much enlarged in consequence of an old hernia. The mucous membrane of the bladder was considerably thickened; the kidneys were quite small. The liver and spleen were rather pale in color and the spleen was quite small in size. No evidences of cancerous deposit were found in either.

Dr. Leonard made microscopic examination of sections from the two tumours and reported that they presented the characteristic type of the true medullary cancer—simple cell-structure without intercellular substance, the cells containing two or more nucleoli and granular matter.

It is interesting to note the presence of both the infiltrated and encysted varieties in the abdomen of the same patient. We are not aware that this is of frequent occurrence.

It is a remarkable feature of this case that so little pain was complained of. It was so slight that the patient never took any medicine especially for it, though the pain is generally a prominent concomitant of these growths. The constitutional symptoms were also late in their development, whereas the converse is the rule. The ill health of the patient in his own estimation had been so slight that he thought he was ailing from a bilious attack and would soon be up again. Although a man of ordinary intelligence he could not be made to realize that his disease was likely to terminate fatally at any moment, and to the last day he expected to recover.

Correspondence.

MR. EDITOR—In the last number of the JOURNAL there appeared a communication on the “ Radical Cure of Hydrocele,” by Z. H. Evans, M. D., and although it is impossible for me, to either admire the doctor’s logic, or approve of the spirit of his criticism, I am far from being unwilling, to discuss the subject or to give so far as I can, “ a reason for the faith that is in me.”

As this is the first time that my doctrines, or my methods of teaching have been publicly called in question, perhaps it will not be out of place for me to refer, very briefly, to some of the general principles which I endeavor to follow in the discharge of my responsible duties, as a teacher of Surgery.

In the first place, while endeavoring to foster a spirit of reverence for the great names in medical literature, and a due regard for well established principles, everything like *blind unquestioning faith* is discountenanced, and a spirit of scientific scepticism is strongly encouraged. Inductive is preferred to deductive reasoning, and the student is urged to make his own observations and experiments, and draw his own conclusions. In the second place, when two or more views of any subject appear to divide professional authority, about equally

between them, all are fairly stated, and the student is urged to form his own opinions deliberately. In the third place, when a given doctrine, or say, a particular method of treatment, of a given affection, has received the sanction of numerous high authorities, and has also been thoroughly tested in my own practice, I feel not only justified, but compelled, in duty to my pupils, to speak with an air of authority, which if taken apart from my *general* encouragement of the spirit of *scepticism*, might justify a charge of dogmatism against me. I do not waste the precious time at my disposal, and exhaust the student's patience, and confuse his ideas, by relating every old and exploded proposition, still less every untried and new-fangled suggestion, which for aught I can know, may have no better foundation to rest upon than a single case, which has happened to make a good recovery.

The responsibility of a clinical teacher, has always seemed to me to be very great, and for him to speak with uncertainty and hesitation, when he would be entitled to do so with firmness and apparent dogmatism is, in my humble opinion, as great a dereliction of duty, as it would be for him to dogmatize, when neither professional nor personal experience can sustain him.

But to return to the communication of Dr. Evans. In the first place the doctor argues that the testimony of our best surgeons does not corroborate the statement that "the practitioner is able to assure the patient of speedy, safe, painless, and permanent relief." And, in the second place, he states that the treatment on which I so confidently teach my pupils to depend, is *not* the same as that which those gentlemen recommend, who feel themselves compelled to give a less favorable and positive prognosis.

Now, taking the Doctor's two statements together, I submit that they constitute a very strong argument in favor of the practice which I am in the habit of inculcating. I do not for a moment contend that the experience of any single individual should be permitted to outweigh the experience of the well-known gentlemen referred to by the Doctor; but *positive* evidence is always more valuable than *negative*, and moreover, I

venture to believe that, even Dr. Evans will be able to see that the testimony of his witnesses is out-weighed and that his sarcastic quotation was out of place; at any rate, in all kindness, I say to him, in the words of his own chosen poet: "Read o'er this; and after, this; and then to breakfast, with what appetite you have."

"The most convenient plan, and the one which from the small proportion of failures seems to deserve its present popularity, is to throw into the sac two, three or more drachms of the tincture or some solution of iodine, and to allow it to remain; when the canula is being withdrawn after the injection, the sides of the sac should be nipped between the finger and thumb to prevent the escape of the iodine from the sac; and the scrotum may be shaken a little roughly so as to insure the contact of the fluid with all parts of the interior of the sac."—*Holmes System of Surgery*—vol. iv p., 554.

"Most of our leading surgeons have now resorted to this practice with iodine, but the amount of experience acquired by the professor (Martin) among the natives of the East, who seem peculiarly liable to this disease, puts all that can be stated by a European practitioner into small compass, for whilst a surgeon possessing even tolerable opportunities here, can speak only of his dozens of cases, or hundreds at most, Sir Ranald Martin can adduce thousands! and these, too, treated within the short period of eight years.

"I have learnt from others who have practised in India, that the method has answered equally well in their trials of it, and I believe it has proved beneficial in equal proportion in other parts of the world. Within the last thirty years, I have almost invariably adopted this practice, when a radical cure was advisable, and have rarely seen it fail."—*Sir Wm. Furguson, Bart.*, 5th Edition, 1870, p. 668.

"It is not necessary to review all the various plans which have been and are now employed for the permanent cure of hydrocele of the tunica vaginalis; it will be more to the purpose, to give the line of practice which is most successful, and which at the same time is very simple, viz: the injection of the cyst with

a solution of iodine." "Acupuncture has been advised, but it has no practical advantage over the simple tapping, and it is certainly less successful in its result."—*Bryant's Practice of Surgery*, 1873, p. 558.

"The injection of the tincture of iodine, originally introduced by Sir J. R. Martin, whilst practising at Calcutta, is now commonly preferred as a more certain and safer mode of treatment than any other."—*Erichsens Science and Art of Surgery*, 1873, p. 828.

Much more evidence to the same effect might, if it were at all necessary, be adduced, but I will content myself with calling just one more witness, one whose testimony is as unequivocal as his authority is unimpeachable.

One of Dr. Evans' own witnesses says: "Of the many methods of treating simple hydrocele, only two need be detailed, as they are applicable to all cases, namely, *injection* and *incision*, including excision of the tunica vaginalis. A small seton may sometimes be permitted in the case of a child, but with the adult it ranks with tent and caustic as too severe. All simple hydroceles which are translucent, no matter what their age or how great their size, are amenable to treatment and cure by injection."—*Genito-Urinary Diseases with Syphilis. VanBuren & Keyes*, 1875, pp. 402-3.

"HYDROCELE, Case I.—Simple Hydrocele.

"A. C., aged 61, was admitted into the hospital on account of a large hydrocele in the right tunica vaginalis, of two years' standing. It was immediately evacuated, and injected with tincture of iodine (3ij Ed. Pharm.), which was allowed to remain, after being diffused over the whole surface by a rough shake of the scrotum. On the third day the subsequent swelling was at its height, on the fourth day it was diminishing. On the seventh day the patient was dismissed cured.

"This case is selected, not from being of an exceptional character, but because it affords an example of the result which usually, or, as I should rather say, *invariably* attends the operation employed. In former times candidates for graduation at

this university used frequently to choose hydrocele as the subject for a thesis, from the variety of opinions entertained in regard to its treatment, and the different procedures employed for this purpose, affording convenient materials for discussion. Thus it was said that port wine, when injected, was apt to fail, and also to produce very serious consequences if it happened to enter the cellular texture of the scrotum—the operations of incision and excision were bloody and painful—the seton was no less tedious than irksome—and so on.

“ But since the use of iodine has been introduced, the theses on hydrocele have gradually become fewer, until they have entirely disappeared; whence I conclude, that the advantages of this means were so manifest that they had led to the abandonment of all the others, and left no room for discussion. I was therefore, accustomed to quote this unanimity of practice as an illustration of what might happen, if through time and careful observation all surgical derangements should come to be treated in accordance with the principles which judgment and experience had decided to be the best for each. But the hopelessness of any such aspirations for the perfectibility of surgery, has been lately well shown, by a strenuous attempt to substitute for the treatment by injection with iodine, the old and justly abandoned procedure of seton, which it was proposed should consist of silver wires, instead of the silk threads formerly employed. It is difficult to imagine that such an absurdity could be adopted by any surgeon of ordinary intelligence, and yet if the medical journals can be regarded as affording indications of professional opinion, it might for some time have appeared that a real improvement had been introduced, instead of a proposal implying the most lamentable lack of practical principle.

“ The injections of iodine, in order to be effectual, must be performed with attention to the following circumstances: In the first place, the patient should stand while the sac is tapped, in order to let the water be drained off completely. Then $\frac{3}{4}$ ij of the Edinburgh tincture of iodine, which is much stronger than that of the London Pharmacopæia, should be injected, unless the tumor is either very large or very small, when there may be a corresponding increase or diminution of the quantity employ-

ed. And lastly, a rough shake of the scrotum, should diffuse the injected fluid over the whole surface of the cavity. The pain which ensues is generally slight and transient, hardly requiring any confinement; and at the end of two or three days, the swelling having attained its height, begins to subside, so that it speedily disappears.

" Unless the points which have been mentioned be duly observed, the procedure may prove abortive, without justly forfeiting confidence, as will appear from the following case: Not long ago a gentlemen applied to me on account of a hydrocele, which he said had been injected more than once with port wine unsuccessfully. I told him very positively that iodine would prove effectual, and soon afterward received a letter from his residence in London, advising me to express myself with less confidence, as his surgeon, without any better success, had injected a compound mixture of iodine and other matters, which after being retained a few minutes, was allowed to escape. I replied, that under the circumstances stated, I was not surprised at the failure. Then came another letter from the patient, desiring to know the particulars which I deemed essential for success. I sent the directions above given, and before long was informed that the operation performed in accordance with them had proved completely successful.

" It may be remarked, that this operation is applicable to all the forms of hydrocele, whether it be the ordinary one of water in the tunica vaginalis, or a collection of fluid in the spermatic cord, or that peculiar condition named spermatocoele, which has been commonly regarded as not amenable to injection."—*Syme's Surgical Works, American Edition, 1866, pp. 809-10-11.*

With regard to Gross and Hamilton, to whom Dr. E. also refers, let me say that nothing could be further from my intentions than to "taboo the opinions and extensive experience" of these distinguished men, at the same time I unhesitatingly aver that the most careful study of their published views has only tended to confirm me in the opinions for which I have now been taken to task.

DONALD MACLEAN.

UNIVERSITY OF MICHIGAN, Dec., 1875.

EDITOR PENINSULAR JOURNAL OF MEDICINE.—I wish to suggest an idea through your columns to surgeons who would like to try the Esmarch rubber bandage. Dr. Rockwell, a dentist of this place, recommended to me the use of what is called Barnum's rubber dam. I procured some of the thickest (which can be found at any dental depot at an expense of \$3.50 per square yard) and cut strips from it about two inches wide, leaving each a yard long as cut off.

Each piece is retained in place perfectly by one turn of the next, and they come off much easier than if the bandage is in one long strip.

Nothing better could be wished, as I recently applied them to a point just below the knee, for the examination of necrosis of tibia, and finding the disease too far advanced for operating, reapplied the bandage, commencing at the point where I left off and continuing well up the thigh, amputated just above the knee; the whole operation of laying the tibia entirely bare and the subsequent amputation being entirely bloodless. Rubber tubing (about one-quarter inch) is best to hold the blood and it should be tied tightly around as near as possible to the last turn of the bandage.

The necrosis in the above case was of such long standing and the patient so enfeebled thereby, that with the ordinary loss of blood in such an operation, I should have considered its expediency very doubtful.

Yours truly,

A. K. WEBSTER, M. D.

ST. JOSEPH, MICH., December 15, 1875.

EDITOR PENINSULAR JOURNAL OF MEDICINE.—In the editorial of your November number you took occasion to charge me with inexcusable misrepresentation, ingratitude and bad taste, on account of statements in a letter to the *New York Medical Record* concerning affairs in the Medical Department of the University of Michigan. Presuming that the accusation of falsehood was not intended to apply to every portion of my article, and desiring to avoid unnecessary length in my reply, I enclosed

to you a copy of the letter in question with the request that you would mark such passages as you considered "grossly erroneous assertions." This favor you granted, and were likewise good enough to write me an explanatory note. I trust I am not presuming too much upon your courtesy in hoping that you will publish this answer in order that the profession may have an opportunity of judging to what extent your charges are sustained.

You have marked the entire paragraph which mentions Dr. Sager's plan for complying with the provisions of the legislature. As the greater part of this is in quotation marks, giving the author's own words about the matter, there would seem to be no point in holding me responsible for the practicability of the scheme. The portion of the passage which I feel called upon to defend is as follows: "Two plans for the details of the expenditure were brought prominently forward. One proposed by Professor Sager, looked to the establishment of the homœopathic school on a distinct and independent basis. As has just been stated, the six thousand dollars and the fees of the homœopathic students would not cover the expenses of a school with a six month's course and as many teachers as the regular school has." I maintain that Professor Sager's plan was "brought prominently forward." He assures me that a fortnight before the Board of Regents was convened in May, he did suggest to several members of the faculty that they ought to insist upon a complete school of homœopathy. But besides this, it is well known that he published in June a definite proposition to this effect, and from a reprint of his article my quotation was made. Since you own journal was the medium chosen for bringing these views to the notice of the profession, I presume you do not object to the word "prominently." The Regents had, indeed, in May agreed upon the present arrangement, but had not appointed the new professors; and it is no strain on anyone's credulity to believe the Board would have felt justified in entirely changing their course if they had been convinced of its injurious effects upon the institution. In the last paragraph of your first December editorial you practically admit the correctness of such a procedure, when you say, "Should the Legislature and the

Regents determine to give the homœopaths an entire faculty and another location, we shall not regret it;" clearly implying that, even now, after the so-called homœopathic college has been established on one basis, the board might with perfect propriety completely alter the system of organization. So, whether or not such a plan as Professor Sager's was proposed at the meeting which the committee of regents had with the faculty, it was certainly brought to their notice so seasonably that the consummation of the existing arrangement could have been avoided.

The statement as to the infeasibility of paying the expenses of a fully manned homœopathic medical school for six months with six thousand dollars and the fees of the students can easily be proved to be correct by any one who will take pains to learn the number of teachers and their salaries, and the number of pupils and their fees.

The closing words of the paragraph are: "This proposition seems to have received little attention and no favor, presumably on account of homœopathic opposition;" an opinion which I have had no reason to modify.

Next, you take exception to my remark that Dr. Sager, "believing that the plan adopted compromised the professional honor of the faculty, promptly resigned his office," as you hold that his resignation was anything but prompt and was made for a different reason. The resignation as published was dated on the third of June, only three weeks and a day after the Regents had taken action in the homœopathic affair. The circumstances of the case seem to me to warrant the belief that Professor Sager refrained from an instant withdrawal from his long cherished college in the hope that better counsels might prevail; but when this was seen to be out of the question, he resigned. And as he did so more than three weeks before the final step of appointing the homœopathic professors was taken, it is not a stretch of language to call his action prompt. His reasons for leaving the faculty were stated by me substantially as he gave them, and I never till now have heard them called in question. In doubting his word in the matter you are in marked disagreement with some, if not all, of his recent colleagues, one of whom wrote last

spring that Dr. Sager "is unquestionably honest in his belief about it" (the homœopathic imbroglio) and thinks it "wrong to in an institution where such heresy is admitted."

In the next sentence I use these words: "Profesor Gross, in a letter to Professor Sager, commanding his determined attitude." With regard to this I frankly admit that I was mistaken. The letter was addressed to Dr. Maclean, not to Dr. Sager, but I quite naturally fell into error from the connection in which the greater part of this letter was first published. However, nobody questions the fact that Professor Gross does approve of Professor Sager's course in cutting loose from the school, and that is the essential point which I intended to make.

You deny "that my knowledge of the facts in the case has been derived from orginal and authentic sources." If my sources of information have not been reliable, I have yet to ascertain it; and, furthermore, I do not see wherein I have fallen into the smallest mistake of opinion on the subject, excepting only that which I have just acknowledged and which appears to me to be utterly trivial and insignificant. I am quite willing to abide by the judgment of the unprejudiced members of the profession as to whether your grave charge of making "grossly erroneous assertions" has been even fairly sustained.

To your accusation of ingratitude to the faculty I shall not attempt to make an answer, not because I could not successfully and easily refute the charge—for I would not in the least shrink from having a truthful statement of all my relations with my recent colleagues made public, if it were necessary—but because I believe that matters so strictly personal should have no place in the discussion of professional ethics; and I am surprised that the faculty, or any member of it, should drag such a topic before a tribunal never intended to sit in judgment on such questions. It is not improper, however, for me to remind you that, in the letter which has given such offence, I took especial pains to give the faculty credit for honesty of purpose in doing as they did.

Whether or not I was guilty of an "offence against good taste" in writing my letter to the *Record*, or in saying what I did,

is a matter of opinion. At all events I think it possessed the negative merit of freedom from intemperate expressions, discourteous phraseology and personal vilification, which cannot truthfully be claimed for every editorial in which it has been criticised.

FREDERIC HENRY GERRISH.

PORTLAND, MAINE, December 17, 1875.

MR. EDITOR—In glancing over the December number of the PENINSULAR JOURNAL OF MEDICINE, I noticed under the head of "Original Communications," "Notes of cases occurring at Prof. Maclean's clinique."

One case I wish particularly to take cognizance of, that of F. C. This case first came under my observation on the eve of March 31, 1874.

On my arrival at the bed-side of the injured man I obtained from him the following statement of the manner in which he received his injury: About 10 A. M., in getting out of a wagon he fell across the edge of the box, striking upon the perineum, immediately behind the scrotum, causing excruciating pain.

Shortly after the accident he attempted micturition, but found it impossible to do so, the obstruction to the current seeming to be near the commencement of the urethra and producing the most violent pain.

On examination, I found the bladder very much distended with urine; perineum terribly contused, blackened and swollen; scrotum distended to its fullest calibre, complete ecchymosis produced by the extravasation of blood into the areolar tissue, as result of the injury.

Something must be done! Ten hours had already elapsed since the injury. I attempted the passage of a catheter, but failed except so far as to draw off a large quantity of blood from the urethra, which seemed to render the patient's suffering more bearable. I then gave him an anodyne, ordering hot fomentations to the perineum and scrotum. At this juncture I sent a messenger after my esteemed colleague, Dr. Knight, who did

not arrive until 10 A. M., April 1st. On his arrival he also made an unsuccessful attempt to introduce a catheter. We then decided to lay open the perineum, which *we did*, in two of the most dependent places, from which the urine escaped. We also thought best to make an incision into the most dependent portion of the scrotum, from which escaped a small portion of urine when he attempted to void it, but the greater portion escaped through the perineal openings.

After making the incisions we placed the patient on anodynes to allay the pain, directing hot fomentations to the scrotum and perineum.

I visited the patient for five days' in succession, at the end of which time the swelling and inflammatory action had very nearly subsided, and the patient had so far recovered from his injuries, as to be able to void nearly all his urine through the natural channel, the incision made in the scrotum having closed up entirely, and only a small portion of urine passing through the perineal openings.

My last visit was made April 24th, 1874, at which time the perineal incisions were entirely closed, and all the urine passed in the natural way, and continued to do so until sometime in July, when a perineal abscess formed, which I was called to open on July 18th. During the formation of the perineal abscess the effort to void urine was so great that an opening was made through the scrotum at the point where the incision was first made; through this opening and the one made by lancing the abscess the urine continued to flow, until Prof. Maclean succeeded in introducing a small probe-pointed catheter.

The error I wish to correct in the notes of the case published, is in the statement that the "abscess soon formed," the fact being that no abscess formed until sometime in July, nearly four months from date of injuries, the urine in the mean time being voided in the natural way.

S. M. WILKINS, M. D.

EATON RAPIDS, MICH.

DEWITT, MICH., Jan. 5, 1876.

EDITOR PENINSULAR JOURNAL OF MEDICINE.—Through the kindness of a professional friend, I have just had the opportunity of reading the personal strictures of Regent C. Rynd upon myself, for such they really are, so far as he has alluded to me or my letter in the November number of the Detroit *Review*.

He says, referring to me, "The Dr. is undoubtedly a good man and worthy of the respect of his neighbors at DeWitt—at least it costs us nothing to suppose so."

Is this the kind of argument to which the distinguished Regent is driven to sustain "his plan of organization?"

Most people will fail to discover what connection or logical bearing the Regent's supposition in respect to my goodness or worth can have upon his plan of introducing homœopathy into the Medical Department of the State University.

In view of Dr. Rynd's sneering regrets that I had "become so disturbed over this subject;" his false insinuation that I had located Prof. Gross as being "of Michigan," and his insulting and insinuating expression of "I trust he (I) will dismiss his (my) anxieties, and grow more cheerful," "It will at least cost us" much of that charity, for the dawn of which, he says, he "sincerely hopes," but which he is very far from putting into practice in the article referred to, to admit that Dr. C. Rynd is an honorable fair-minded man, above stooping to false insinuations and gratuitous personal abuse of an-opponent, whenever he finds abuse easier than argument.

Among those who know us we are quite content to leave Dr. Rynd's disparaging insinuations respecting us to their unbiased judgment.

The main question at issue has already been quite fully discussed, and I am content to await the authoritative decision of an enlightened professional opinion through the American Medical Association.

G. W. TOPPING.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT D. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

PHOSPHORIC ACID, DILUTED AND GLACIAL.

There has been no little interest, in pharmaceutical circles of late, in the preparation of the diluted phosphoric acid of the pharmacopœia, as a standard solution of pure orthophosphoric acid. The inquiry seems to have started from the observation at the prescription table that tincture of chloride of iron is frequently (but not always) precipitated by diluted phosphoric acid. Orthophosphoric acid gives no precipitate with normal ferric chloride,—the ferric phosphate being soluble in very dilute hydrochloric acid. As hydrochloric acid somewhat less dilute is required to dissolve ferric pyrophosphate or metaphosphate, it was suggested that the presence of pyrophosphoric acid or metaphosphoric acid, in the diluted phosphoric acid, causes the precipitate in tincture of chloride of iron. The second process of the pharmacopœia, preparing the diluted acid (orthophosphoric) from the glacial acid (metaphosphoric), has been generally chosen, both by manufacturers and pharmacists, as more simple than the first process, in which phosphorus is taken. Now we are satisfied that if metaphosphoric (glacial) acid, *free from bases*, be treated as the pharmacopœia directs, it must be wholly converted to the tribasic form. Then, what is the matter with the glacial acid we buy?

There were three good reports on this subject at the Boston meeting of the American Pharmaceutical Association, last September, and (it puns, itself) a report at Philadelphia soon afterward. Prof. Remington reported that the trouble was due to sodic metaphosphate and pyrophosphate in the glacial acid of the market; as much as thirty per cent. being added by the manufacturer to make the glacial acid keep in shape. Prof. Dohme showed that all the glacial acid in commerce is nearly half neutralized by so-

dium: finding 47 and 49 per cent. of salt in two samples! Evidently the only resource is to prepare the dilute acid from phosphorus, and Prof. Markoe recommended a modification of the pharmacopœial process, in which the action of nitric acid on phosphorus is hastened by addition of a little bromine. The same bromine acts over and over, carrying oxygen from the nitric acid to the phosphorus, through the intervention of water. It was in this process (the limits of strength of nitric acid and quantity of each addition of bromine not being duly stated) that Dr. Pile, of Philadelphia, suffered a most violent explosion—fortunately in the open air and fortunately published on the heels of Prof. Markoe's recommendation.

With due precautions, bromine or iodine, or both, may be safely used with the nitric acid, no doubt; but the action of nitric acid alone, *just as the pharmacopœia directs* in its first process, works exceedingly well. Any pharmacist can use the process.

Physicians as well as pharmacists are interested in the fact that all the glacial and most of the diluted phosphoric acid of the market have been one-third to one-half substituted by phosphate of sodium. As to the glacial aid, it is generally pretty nearly uniform in composition, and, to be a solid, will probably continue to be used in its present quality. Physicians can rely upon their experience of its power, as a uniform mixture of hydric and sodic metaphosphates. Pure metaphosphoric acid, in its syrupy state, is proposed for medicinal use, but it is not likely to be mistaken for the glacial acid. But the diluted acid is not uniform. Hereafter, conscientious manufacturers and pharmacists will chiefly make it from phosphorus, free from sodium. Of the absolute acid, the patient will therefore most often receive nearly double the dose formerly given, unless the prescriber takes some precaution. Would it not be well to designate in prescriptions "acidi phosphorici diluti (from phosphorus)" or, if preferred "(from the glacial)"?

It need not be stated that the precipitation of tincture of chloride of iron by diluted phosphoric acid is accounted for by the presence of sodium phosphate; phosphates precipitating iron

salts as well as those of other non-alkaline bases. As to the fact that glacial phosphoric acid, of even the best manufacturers, does contain large quantities of sodic phosphate, there is an abundance of evidence, though it seems not to have attracted attention, at least in this country, until lately. In 1867, Brescius reported finding near 50 per cent. of sodium phosphate in the glacial phosphoric acid of Commerce.¹

He also stated that pure dry metaphosphoric acid is soft and glutinous; so that the solid condition is evidence of impurity. Duflos directs the examination for sodium in the commercial analysis of the glacial acid.² And Hager states that the glacial acid in hard fragments contains sodium to preserve consistency, and that the glacial acid in sticks is sodium metaphosphate with metaphosphoric and pyrophosphoric acids.³

In 1872, the writer reported the analysis of six samples of the glacial acid, each containing sodic metaphosphate, as follows⁴: Powers and Wightman's, 23 per cent.; Merck's, 35 per cent.; another of Merck's, 38 per cent.; unknown manufacture, 26 per cent.; another of Powers and Wightman's, 24 per cent.; another unknown, 31 per cent. These statements elicited, at the time, correspondence from a number of persons, but not from manufacturers.

Sodium is a subtle impurity in phosphoric acids. The tests of the pharmacopœia do not exclude it; except the saturation test for the diluted acid, "one hundred grains of it [the solution] are saturated by twenty-three and four-tenths grains of bicarbonate of potassium." The bicarbonate being added in minute portions at the last, the last addition must conclude the effervescence, and the reaction must be neutral or but just alkaline. Two-thirds metallic phosphate is formed. But the results of saturation depend upon the acid being wholly tribasic,—when $7\frac{1}{2}$ to 8 per cent. of anhydride is ensured.

(1) *Zeitschrift f. anal. Chem.*, vi, 187. Watt's *Dictionary of Chemistry*, first supplement, (1872) 938.

(2) *Angewandt. Chem. Anal.* (1871) 41.

(3) *Untersuchungen* (1871) 523.

(4) *Proceedings Am. Phar. Asso.*, xx, 259.

inhaled. The "non-volatile" alkaloids, as those of opium, though incapable of vaporization without change of composition and properties, yet do yield sublimates when heated, and the crystallization or aggregation of those sublimates, at stated temperatures, is so surely characteristic as to furnish an important means of identification in analysis.¹

Neither the chemical nor physiological properties of these sublimates have been studied. In the solanaceæ, atropia and hyoscyamia, the alkaloids of belladonna, stramonium and hyoscyamus, vaporize with but partial decomposition at a little above boiling water heat,—approaching in this and other respects to the character of the tobacco alkaloid. As to the traditional smoking of solanaceous leaves (other than tobacco) as a palliative in asthma, most medical readers have more knowledge than the writer.

It is also an old remedy to inhale the smoke from burning paper previously saturated with solution of nitre and dried. What peculiarities there are about these vapors, we don't know; it would be interesting to burn a few pounds and analyze the distillate; probably there would be found considerable formic acid, beside creosote and other constituents of ordinary pyroligneous acid, and possibly a little nitrous oxide may be formed (?).

Some time ago we had occasion to analyze "*Langell's Asthma Remedy.*" It was a mixture of ten or twelve parts of coarsely powdered belladonna leaves with one part of powdered nitrate of potassium, dried together. The packages were about two ounces (judging from memory), and were priced \$1.25 each. Pharmacists would put it up to order at fifty or sixty cents a pound. On igniting a portion, on a plate, combustion slowly extends through the mass and the patient inhales the smoke. It is said to give prompt relief, and to be asked for. An acquaintance, who is an old sufferer from asthma, having tried it, recognized it as a choice and valued remedy which a clergyman shared sparingly with him twelve or fifteen years ago, and which he was afterward unable to obtain.

(1) Helvig: *Zeitsch. anal. Chem.*, iii, (1864), 43.

Ophthalmology and Otology.

ATRESIA OF THE EXTERNAL AUDITORY CANAL.

At a meeting of the Vienna Med. Society, Prof. Gruber (*Med.-chirurg. Centralblatt*, No. 8, 1875) presented two patients, a girl eleven years and a woman twenty-eight years of age, both of whom were affected with atresia of the external auditory canal; in the younger patient this condition existed in both ears, in older only in the right ear, though the diameter of the left external canal was already so contracted as only to admit a probe three-quarters of a millimetre in diameter. In both individuals the occlusion had resulted from neglect of proper care and treatment during chronic inflammation, and in both the hearing-power was diminished in a marked degree.

Atresia is either congenital or acquired. The congenital variety is rarely found without the coexistence of malformations and defective development. In such cases, either portions of the external ear alone are wanting, or their development has been rudimentary; or, what is worse, this malformation is combined with defective formation of the deeper structures, even of the labyrinth, in which case deafness of the affected ear must result, while, when only sections of the external and middle ear are wanting, a considerable degree of hearing power can exist even with atresia of the auditory canal, provided any of the structures of the labyrinth are *intact*. Gruber first demonstrated that, as in case of deformed auricle, which is occasionally attached in an anomalous position at the side of the head when there is defective development of the external ear, the situation of the deeper structures is likewise to be sought in a different location before a positive decision is given concerning their complete absence. This relation should be borne in mind the more when the question arises of forming an auricular canal by operation. He further observed that, in the new-born, a positive opinion concerning the future hearing of the child should never be given

until the child has attained an age when the hearing-power can be tested with hope of success. When such a child has attained the age in which children react to external irritation of the auditory nerve, and it does not react to tones and sounds, there is evidence that the deeper structures are defective, and then the prognosis is unfavorable. However, it must be remembered that in some children the hearing-power commences at a late period. Gruber likewise recommends that the surgeon should be guarded in performing the operation at the desire of the parents, for it is very possible that it might be performed without any hope of success; and, when at a later period the indication for operation might present itself, the rules which he has laid down should be borne in mind. In regard to the acquired forms, he says usually they are the result of badly-treated inflammations, or of diseases whose effect is ulceration or cicatrical formation. Thus, Gruber once operated in a case of atresia occurring after lupus, in another after epithelial cancer. Though the occlusion may occur at any portion of the canal, the inner half is more often affected than the outer. Owing to the peculiar construction of the external canal in the new-born and in the young child, when the osseous portion of the canal is not yet fully formed, adhesions may easily take place between the already closely approximated walls of the canal; and this is also the reason why in children during the first years of life the walls grow together, a fact which has been sufficiently proved by statistics. The occlusion rarely takes place by means of the soft structures alone. As a rule, hyperostosis of the bony walls occurs during the progress of chronic inflammations, which finally occludes the whole canal. An examination then reveals the external canal closed by bony structures covered by cutis. In the two cases presented, this condition prevailed once on the right side and once on the left; while in the right ear of the younger patient the occlusion was made up of soft cicatrical tissue. Prof. Gruber believed that the two cases were proper subjects for operation, which he intended to perform by means of galvano-cautery.—*New York Med. Jour.*

Proceedings of Societies.

ST. CLAIR, SANILAC, AND LAPEER COUNTY MEDICAL SOCIETY.

The quarterly meeting of the St. Clair, Sanilac, and Lapeer County Medical Society was held at Imlay City on the 23d of November, 1875, Hugh McColl, President, in the chair, a fair representation was present from Port Huron, Imlay, Lapeer and other places along the line of C. & L. M. R. R.

After attending to preliminary matters the society entered upon the discussion of the subject referred from last meeting, viz : "post partum fevers."

Dr. Stockwell called for. Considers puerperal fever due to a septic poison, similar in its outward manifestation to that which produces erysipelas. There were many peculiar features common to both diseases, they very frequently prevail at the same time, and are amenable to the same general course of treatment. Antiseptics are always indicated, among which stand first in importance, iron and quinine, the former he prefers in the form of the mur. tincture, which he gives in 20 or 25 drop dose, repeated every four or five hours; gives this not so much for its tonic properties as for its well-known power to neutralize septic poisoning. Recommends the persistent use of large doses of quinine and enforces the most rigid hygienic measures.

Dr. McColl alluded to the three doctrines held by the profession as to its aetiology :

1st. A septic poison generated in the decomposing tissues following parturition.

2d. An atmospheric influence prevailing in certain localities and predisposing to low forms of fever.

3d. A specific poison communicable from patient to patient, or from the attendant to the puerperal patient.

He thinks its pathology is not very satisfactorily settled ; inclined to the belief that it is a specific disease dependent upon a

poison entirely distinct from erysipelas, scarlatina, or the low grades of fever. Whatever be its cause, the poison finds ready access through the laceration consequent upon labor, as well as through the abraded surface after the separation of the placenta.

He places quinine in the foremost rank as an antipyretic remedy, has great confidence in it also as an antiseptic administered in large doses, say from 15 to 20 grains. In early stages uses veratrum to lower the heart, also uses turpentine as an antiseptic.

Dr. Jones inclines to the belief that this fever is dependant upon the presence of a zymotic poison, identical in its character with that producing erysipelas. This fever belonging to the low types can only be successfully treated by commencing in its early stages with a general supportive plan of treatment; remedies are fruitless after the coffee ground vomit sets in.

Dr. Greenshields gave a brief account of an unexpected and quite sudden death occurring recently in his practice. He had the patient under treatment for uterine haemorrhage which had been very profuse for several days, but which finally ceased under the use of ergot. He then removed a large putrid mass with the forceps, five days later, when he thought his patient out of danger. He was surprised to hear of her sudden death; was inclined to regard it as a case of pyæmic poisoning.

The majority of those present thought her death attributable to embolism; the formation of large clots in the uterine sinuses and portions of them becoming detached, carried in the circulation to the heart, where they accumulated and rapidly overcame the action of this organ.

Dr. McGuirk and Dr. Blake related accounts of interesting cases of sudden death from septicemia.

Dr. Jones urges the importance of thorough prophylactic measures in obstetric practice; never leaves a case till he is fully satisfied that the shreds of membranes are entirely removed and the uterus firmly contracted.

Dr. Nash asked the expression of the members in the use of intra-uterine injections following confinement to facilitate the

removal of putrid accumulations; was replied to by Dr. Stockwell, who seldom or never resorts to this as a prophylactic measure; considers it rather unsafe, even with the mildest injections that can be used. Others thought the measure perfectly safe if the double canula be used.

Dr. Stockwell cautions against downward pressure upon the fundus, to assist the expulsion of the placenta; thinks displacements frequently follow this practice. With reference to the use of cathartics following labor, he is in the habit of trusting largely to nature, abstains from active cathartics. The free use of pure air is of vital importance in the puerperal state, true cleanliness is not brought about so much by much washing. It consists as much in the healthful action of the skin, removing the vitiative exhalations and in supplying plenty of pure air.

Dr. Jones presented a case of nævus, occupying the scalp of a child of two years. Had been treated by injections of ferri. per sulphate with partial success; was recommended to ligate the the supplying vessels. Dr. McColl advised enucleating the entire mass.

On motion, the discussion on pneumonia was opened by Dr. Nash, in which all the members participated. Dr. Stockwell has great confidence in large doses of quinine, alternated with carb. ammonium, the latter to stimulate the capillary circulation, and to aid in equalizing the general circulation, and thus overcome local hyperæmia and blood stasis; he recommends very large doses of quinine.

Dr. Jones adopted the antiphlogistic plan of treatment when he entered the profession, then took up Prof. Flint's doctrine of trying to limit the exudation process by giving large doses of opium and a very liberal supply of diffusible stimulants; has since modified his treatment somewhat; now gives full doses of quinine from the first, and speaks in the highest terms of carb. ammonium in the treatment of this disease; thinks stimulating applications to the chest very important.

Dr. Kinny cautioned against over-medication, particularly in children. Nature will accomplish wonders in their diseases, especially if seconded by judicious nursing. He is governed

altogether by the character of the expectoration as to the time of commencing the stimulants. When the sputa is of the prune juice order, and readily saturates the cloth used, having little or no consistence to it, with a pinched or blanched expression, of the countenance, he gives quinine and alcoholic stimulants with a free hand, and persists in their use through the entire course of the disease. On the subsiding of the acute symptoms he almost invariably applies a blister over the affected part.

Dr. Yerex has recently given lactopeptine a trial in cases of dyspepsia and bowel complaint, with satisfactory results.

On motion, the subject of "puerperal convulsions," was made the topic for discussion for the next meeting, Dr. Stockwell to furnish the paper.

Also, "quinine as a therapeutic agent," was recommended as a subject for the next meeting, to be introduced by a paper from Dr. Kinny.

Dr. McColl read a very interesting paper on some of the causes which predispose to the development of phthisis, which was referred to the committee on publication.

On motion, the society adjourned to meet in February next at Port Huron.

A. NASH, *Secretary.*

VAN BUREN COUNTY MEDICAL SOCIETY.

The last meeting of the Van Buren County Medical Society was held at Bangor, October 12th, 1875.

Drs. J. Andrews, T. H. Briggs, and L. C. Woodman, were appointed a committee to draft resolutions expressing the sense of this society regarding the action of the Professors of the Medical College of the Michigan University.

The committee reported the following preamble and resolutions, which were adopted :

WHEREAS, The last Legislature enacted a law providing for the establishment of two Professorships of Homœopathy in the Medical Department of the University; and

WHEREAS, The Regents of the University have felt it their duty to carry out the provision of that law, and to that end have appointed two Homoeopathic Professors; and

WHEREAS, The attempt to unite in the same institution, and under the same authority, two systems of medicine so totally unlike, and so utterly irreconcilable, must lead to an "irrepressible conflict," and end in destroying the usefulness of the Medical Department of the University; therefore,

Resolved, As there can be no possible agreement between regular medicine and the homoeopathic system, the regular professors, in the judgment of this society, should have resigned their positions at once.

Resolved, That the members of this society do most heartily commend the action of Prof. Sager, in promptly resigning his position of Dean of the Medical Faculty.

Resolved, That while we have felt a just pride in the name and fame of the Department of Medicine and Surgery of the University of our State, we cannot conscientiously recommend our students to go there to receive medical instruction, since the Legislature and Board of Regents have seen fit to ingraft upon it a system which the regular profession everywhere regards as quackery.

The constitution was changed so as to have two meetings of two days each, instead of four of one day each, in every year.

The next meeting will be at Hartford, on the second Tuesday of January.

J. ELLIOTT SWEET,
Secretary.

*THE SOUTHERN MICHIGAN AND NORTHERN INDIANA
MEDICAL ASSOCIATION.*

The Southern Michigan and Northern Indiana Medical Association met at Hillsdale, Mich., December 15th, 1875, in the Court House, and was called to order about 11 A. M. by Dr. Hamilton, of Tecumseh, President of the Association. Dr. H. C. Wyman, of Blissfield called the roll, about 40 members were present.

Dr. Smart, of Hudson, read a very interesting paper on the use of ergot and its various preparations. On motion of Dr.

Rynd, the thanks of the society were voted Dr. Smart, and his paper was referred for publication.

Dr. Stewart read a paper on paralysis which was placed on file, after which an adjournment was had for dinner.

After dinner the names of Drs. Chapman, father and son, of Hudson, were presented to the society, by the appropriate committee, without recommendation. This involved a very spirited discussion, as these gentlemen were charged with homœopathic tendencies. It was finally settled by these gentlemen subscribing to certain test questions submitted by Dr. Rynd, and they were then elected.

A letter was read from Dr. Jones, of Toledo, which was an epitome of his views on the relationship of homœopathy to the University. It was moved and supported that the letter of Dr. Jones be published in the Detroit *Review of Medicine*. This provoked a long and heated discussion, which was participated in by Drs. Southworth, Minchin, Whelan, Cutter, Woods, Clisbee, Curry, Beach, Rynd, and others. Dr. Rynd objected to the publishing of the letter, by order of the society, as it would be in some sense an indorsement of the letter by the society; an injury to the Medical Department of the University, and a meddlesome interference with a matter which if left alone would settle itself. He spoke of the good faith manifested by the Regents, and the honor, integrity, and faithfulness of the Regular Medical Faculty. The Regent very firmly stated that the Regents had nothing to retract, would re-enact the plan of organization of May last, if called to act under similar circumstances to those which then existed; that the Faculty were in the path of duty to the profession and humanity, and that they were entitled to the support and confidence of the profession everywhere.

Dr. Beach, of Coldwater, followed in a similar strain, and after a long and heated discussion, *pro* and *con*, the resolution to publish the letter of Dr. Jones, was laid on the table. It was afterwards, by vote placed on file.

Following this Dr. Beach introduced the following resolutions, prefacing their introduction with a few eloquent remarks expressive of confidence in the regular Medical Faculty. The

resolutions were carried, the first without opposition, and the second with but comparatively little objection—only a small minority voting against its passage :

Resolved, That this Association condemn the Legislative action shown in the introduction of Homœopathic Chairs of Medicine in the University of Michigan.

Resolved, That this Association has entire confidence in the professional integrity of the regular Faculty of the University, heartily approve of their determination to stand at their posts, and fully sympathize with them in their efforts to maintain legitimate medicine.

Following this, Dr. Curry, of Toledo, read a very interesting paper on "Glaucoma," which was discussed, thanks extended, and the paper referred for publication.

Dr. Beach read a very amusing and ingenious poetical production on ague, which produced marked good feeling, was full of happy hits, and secured a unanimous vote of thanks.

After supper, the society transacted some business of a financial character, then listened to a paper from Dr. Southworth, of Monroe, on capillary inflammation. The paper was well received and was referred for publication.

Extemporaneous remarks touching cases of interest and importance, were then presented by Dr. Hamilton, the President, Drs. Smart, Rynd, and several other members of the profession.

This portion of the work of the society was of great interest and usefulness.

Albion was fixed as the place for the next meeting of the society.

On motion of Dr. Rynd, Drs. Beach, Everett, and Minchin were appointed a committee to report the names of ten delegates to the society for its action, to represent the society at the next meeting of the American Medical Association, at Philadelphia, next summer. The following names were reported by Dr. Beach, and the report was unanimously adopted :

Drs. Rynd, of Adrian; Wood, of Angola; Cutter, of Coldwater; Southworth, Monroe; Curry, Toledo; Green, Calhoun Co.; Haggerty, Fremont, Ind.; Hamilton, Tecumseh; Stod-

dart, Albion; Cressy, Hillsdale. Vacancies were ordered filled by the President and Secretary.

Dr. Cutter agreed to present his views at the next meeting on the physiological action, or rather non-action, of restorative mediums; Dr. Rynd on causes operating in producing so many deaths in public men from apoplexy, paralysis, etc; Dr. Smart, on changes taking place in the vascular system from certain kidney diseases.

It was then at the hour of nearly 11 p. m., moved and carried that the society adjourn till the second Tuesday in July, to meet at Albion. In addition to the names already mentioned, Dr. Laverty, of Fairfield was in attendance. The association numbers about 100 members.

The dignity, patience, courtesy and ability manifested by Dr. Hamilton, the President, and Dr. Wyman, Secretary, were recognized and appreciated by all present.

Selections and Translations.

ON ANÆMIA.

The disease which we call anæmia, more or less incorrectly, but for which perhaps it would be difficult to find a more appropriate name, may be the result of a number of different causes. I do not propose now, however, to consider more than one form of anæmia—that which we meet with so frequently amongst young unmarried women, and which generally occurs in connection with some disordered state of the menstrual function. In such cases the catamenia are usually irregular in their appearance, frequently absent for months together, the discharge pale and scanty when it does occur, lasting sometimes but a few hours.

The relation of anæmia to amenorrhœa, pathologically, is of some interest. Is the latter due to the poverty of the blood? or is the formation of red corpuscles in some way discouraged

by the irregular performance of the uterine functions? Doubtless anæmia, however produced, frequently gives rise to a scanty and infrequent catamenial discharge, as we see in advanced phthisis, and other wasting and blood-spoiling disorders. But is the converse true? Will functional irregularity of the monthly periods, when continued for any time, produce anæmia? I believe it will. There is some reason to suppose that the menstrual discharge is, to a certain extent, an excretion; and possibly its absence may lead to the retention in the blood of some material hostile to the formation of red-corpuscles. We certainly see cases of young girls who have enjoyed good health and looked well up to the period of puberty, in whom anæmia has gradually occurred in consequence of non-appearance of the catamenia at their proper time; and the accidental stoppage of the courses in a healthy young woman, from exposure to wet and cold at an unfortunate time, or from some shock to the nervous system, will often, if the function remain suspended any time, lead to anæmia. But I do not think that the disorder is produced in these cases so much (if at all) by the retention of some morbid matter in the blood, as by the disturbing effect upon the nervous system of the absence or irregular performance of an important sexual function.

When this form of anæmia is allowed to go on without proper treatment, the patient ultimately presents an almost blanched appearance, the skin having a sickly green tint; hence the term "chlorosis." The lips and cheeks are usually as pale as the forehead, but the face not unfrequently has an unnatural flush, which might deceive the inexperienced. The conjunctivæ are of a pearly white, sometimes of a slightly yellow hue, which must not be mistaken for jaundice. It is a wonder how such persons can get about or do anything, and, in truth, they are not fit for much. Upon the slightest exertion, and especially on going up stairs, they suffer from palpitation of the heart and breathlessness. They often feel faint, giddy, and sick; complain of pain in the left side, indigestion, loss of appetite; the bowels do not act well, the tongue is furred, and the breath foul; towards evening the ankles become puffy and swollen; a soft

systolic bruit may be heard over the base of the heart, and in the veins of the neck the stethoscope will detect the so-called "humming-top" murmur, or *bruit de diable*; but it must be remembered that this latter sound may be sometimes produced in a healthy person by the mere pressure of the stethoscope.

Anæmic women are generally more or less nervous, and sometimes hysterical, but I should not say there was any marked connection between anæmia and hysteria.

How are these cases to be treated? Clearly by so nourishing the blood as to build up the red corpuscles and raise them to the proper standard in health. Steel is the medicine upon which we chiefly rely to effect a cure, but to be successful in the treatment requires some care and discrimination. If the tongue is coated and the digestion much impaired, the more astringent forms of iron, such as the sulphate or the perchloride, are often not tolerated at first; and the ammonio-citrate, the *mistura ferri co.*, or the *ferrum redactum*, will be the best to begin with. In a large number of cases I have found nothing so successful as a combination of the ammonio-citrate of iron and rhubarb in suitable doses, with equal parts of some bitter infusion and peppermint-water. Sometimes the addition of two or three grains of the carbonate of ammonia seems to be useful. I make rather a point of the rhubarb, although it is so disagreeable to take, as I believe it must assist the action of the steel, especially when the stomach is out of order. If the patient is very nervous, ten grains of bromide of potassium may be added with advantage to each dose of the mixture. If the rhubarb in the mixture does not act enough upon the bowels, it will be necessary to prescribe some aperient pill to be taken at bed-time. Preparations containing aloes are of service, and may be combined with steel. Pepsine is often used with the meals. The diet should be light and simple; beer had better be avoided in most cases, and a glass or two of light claret may take its place with advantage. I believe claret is certainly better than port, although that wine is so often recommended. A moderate amount of exercise out of doors, when the weather permits, should be insisted upon, but anything like fatigue must be avoided. A tepid

bath in the morning, and a rub down afterwards with a rough towel, is a good thing.

By-and-by, in a few weeks, more or less, the steel and rhubarb mixture may be left off, and fifteen drops of the solution of perchloride of iron given after each meal, in a wineglass of water.

Under the very best and most careful treatment, the improvement in anæmia is not unfrequently slow and tedious, and, to prevent disappointment, it is as well to caution patients and their friends that they are not to expect, as a rule, any very rapid change. Once get the patient on the road to health, however, and time and perseverance will do the rest.—*Dr. Pollock in London Lancet.*

BANDAGING.*

CROSS OF THE EYE—(MONOCLE.)

DESCRIPTION.—This bandage should be six yards in length and have a width of from one and a half to two inches.

APPLICATION.—Taking the right eye for example, standing be-

FIG. 1



hind your patient, place the initial end of the roller, 1, above the right eye, previously protected by a compress or some cotton-wool. Confining this by one horizontal circular turn, 2, about the head and continuing on till you come to the occiput, for the next turn; here you make a pass downwards, coming along under the right ear, then up over the inferior angle of the inferior maxilla of the right side, and across the inner angle of the orbit, finishing the third course of the

bandage. Continuing on from this point (the forehead), the bandage is to be carried up over the left parietal protuberance, then down to a level with the circular turns 1 and 2, and finally

*By permission, from "A MANUAL OF BANDAGING," by C. Henri Leonard, M. A., M. D.

finished as a circular of the head, thus making the fourth course. Course 5 is to be executed the same as course 3, remembering to overlap in its course, to the distance of one-half or three-quarters of its width, the preceding turn. Course 6 is executed the same as course 4, remembering the overlapping. Finally, when you come near the terminal end of your bandage, confine by one or two circular turns about the forehead and occiput, following courses 1 and 2.

USES.—This is a very pretty and firm monocular bandage when evenly applied yet it is one that needs some watching lest some of the courses overslip each other, especially if put on a patient that is not very quiet.

PERFORATED T OF THE HEAD AND EAR.

DESCRIPTION.—The first piece should be three yards long by two inches wide, and to this, perpendicular to its plane, there should be stitched, at eighteen inches from one of its ends, a bandage having the same length and width, save at the extremity attached to the first piece; here it should be semi-oval, with a width two or three times that of the plane of the bandage; this oval part should be perforated by a longitudinal slit of sufficient size as to "take in" the ear.

APPLICATION.—Pass the ear of the diseased side (suppose it to be the right) through the second portion of the bandage, B, bringing

FIG. 2.



Perforated T of the Head and Ear.

the bandage closely and snugly up to the head. Carry the shorter end of the horizontal portion of the bandage smoothly around the occiput and forehead, and confine a single horizontal circular turn, 2. Carry, now, the perpendicular portion of the bandage, B, down under the chin, up over the opposite ear to the top of the head

and down to the starting point, thus finishing the first turn of the perpendicular portion of the bandage. Exhaust the remaining portion of the bandage, *b*, by similar perpendicular turns about the head, and at last confine the end by a pin, to the horizontal turn, *z*. This done, exhaust the remaining portion of the roller, *A*, by horizontal turns about the head, confining as usual.

USES.—This bandage is found very useful in maintaining blisters to the mastoid process, or dressings thereto, as is frequently needed in diseases of the ears. It is equally useful in confining dressings upon the ears, temporal, parotid, and tonsillar regions.

FIGURE OF 8 OF THE NECK AND AXILLA.—(SPICA OF THE SHOULDER.)

DESCRIPTION.—This bandage should be made from a roller, six yards in length by two inches in width.

APPLICATION.—Place the initial end of the bandage at the side of the neck, *1*; confine by a single horizontal circular turn, *2*. Continue the course of the bandage about the neck, at last crossing down to the axilla from over the back of the shoulder, thus finishing course *3*. Course *4* is made by carrying the roller-head up over



Figure of 8 of the Neck and Axilla.

the anterior surface of the shoulder, from under the axilla, to the back of the neck. Course *5* is made the same as course *3*; course *6* as course *4*; course *7* as course *5*; course *8* as course *6*, and so on. At last exhaust the bandage by a single horizontal turn about the neck, and confine as usual.

USES.—To confine dressings to the clavicular, sub-clavicular, and axillary regions; and, also, upon the shoulder.

DOUBLE T OF THE BACK OF THE HAND AND WRIST.

DESCRIPTION.—The main bandage, A, should be some twenty-eight inches in length by one inch in width.

FIG. 4.



At a distance of three inches from the initial end, stitch, at right angles, another bandage, B, twenty inches long, by three-quarters of an inch wide; at a point two inches from this,

stitch, at right angles to the plane of the main bandage, and parallel to B, another bandage,

C, of the same dimensions.

APPLICATION.—Place the initial end of the bandage, A, upon

FIG. 5.



Double T of the Back of the Hand and Wrist.

the back of the wrist, so that the first perpendicular portion of the bandage, B, will correspond to the first interosseous space, and the portion C, with the fourth interosseous space. Confine the initial end by a single circular turn, 2, about the wrist. Carry the portion B down the first interosseous space, around over the palmar surface of the first joint of the index finger, and then back, over the second interosseous space, to the wrist; this done, make another circular turn about the wrist with the main bandage, as turn 3, running over the recurrent portion of B at the wrist.

Continue these circular turns of A until the bandage is exhausted, when confine with a pin. Conduct, now, the other perpendicular portion, C, down the fourth interosseous space, across the palmar surface of the metacarpo-phalangeal articulation of the ring-finger, back, over the third interosseous space, to the wrist, here tying with the end of the first portion, B, as at D, after the requisite amount of extension of the palmar tissues, or fingers, has been obtained.

USES.—In cases of burns of the palm of the hand, or extensive suppurations, where vicious cicatricial contractions are to

be feared. In cases of injuries of the finger-clefts, from burns or otherwise; here using compresses, soaked in carbolized oil, to prevent the union of the sides of the fingers from "angular" granulation. Also for confining dressings to the back of the hand.

VARIETY.—Single T of the Back of the Hand and Wrist.—In this case but one perpendicular portion of the bandage is used, as *b*, or *c*; it being applied between any finger-clefts desired, and in a manner similar to the above.

The uses are similar to the Double **T** just described, only are more limited.

POSTERIOR DOUBLE FIGURE OF 8 OF THE ELBOW AND THE OPPOSITE AXILLA.

DESCRIPTION.—This bandage should be a cravat two yards in length by eight or ten inches in width. It can be made out of a small shawl, if necessary.

APPLICATION.—Standing in front of your patient, and holding

FIG. 6.



Posterior Double Figure of 8 of the Elbow and the Opposite Axilla.

the bandage with its centre across the palm of the hand, place the centre of the cravat over the elbow, *A*, of the injured member, both ends hanging down toward the floor. Seize the innermost extremity and carry it *a*, across the inside of the arm, under the diseased axilla, up in front of the same axilla

and over the same shoulder, and then obliquely down across the back, *b*, to the opposite axilla, where you surround the shoulder with the same extremity of the cravat, at last entrusting it to the care of an assistant. Carry the other extremity of the cravat forward across the bend of the elbow, and over the other end of the bandage, then backward, under the diseased axilla, as *c*, and then finally upward to the opposite shoulder, there confining by

tying, after the arm has been sufficiently extended backward. You will then need a "sling," for the horizontal support of the forearm and hand, which can be pinned to the cravat as it crosses the shoulder, or about the neck.

USES.—This bandage was designed by Dr. E. M. Moore to take the place of the numerous dressings for fractured clavicle. It dispenses with the "axillary pad," and the more complicated system of Fox and Desault, and seems, from certain anatomical reasons, to be superior to them for maintaining a coaptation of the clavicular extremities. It certainly has the argument of simplicity in its favor.

FIGURE OF 8 OF THE FOOT AND ANKLE.

DESCRIPTION.—This should be a roller two and a half yards in length by one and three-quarter inches in width.

APPLICATION.—Place the initial end, 1, at the front of the leg, a few fingers' breadth above the ankle, and confine it by the horizontal circular turn, 2. Continue on in the same course till you come to the inner malleolus again, supposing it to be the left foot that you are dressing, when you descend obliquely across the dorsum of the foot to the fifth metatarsus, thus completing course 3. Make, then, a circular turn about the metatarsal bones (course 4), coming obliquely across the dorsum of the foot, from within outwards, to the outer malleolus, thus completing course 5. Course 6 is made similarly to course 3, course 7 to course 5, and so on. At last exhaust the bandage by circular turns about the lower portion of the leg, and confine in the ordinary way.

USES.—For confining dressings either to the dorsum of the foot, or to the surface contiguous to the malleoli. Also for com-



Figure of 8 of the Foot and Ankle.

pression, after venesection from one of the dorsal veins of the foot; a graduate compress would be necessary in this case.

THE FIGURE OF 8 SPIRAL OF THE EXTREMITIES.

DESCRIPTION.—This bandage is a *double* spiral, and needs for its application a roller bandage ten yards in length by two inches in width.

APPLICATION.—Place the initial end at the roots of the toes

FIG. 8.



The Figure of 8 Spiral of the Extremities.

confining by a single spiral turn about the foot, and cover the foot as in the Spiral of the Inferior Extremity, by reverses and figures of 8. Having reached the leg, one turn and a half is made before a reverse is used. Thus the reverse is employed on the second turn of an ordinary spiral, instead of upon the first, as in the simple spiral with reverses. This process of reversing upon each second turn from the last reversement is pursued up the entire limb. Hence, course 9 is a simple spiral, whilst course 10 is a spiral with a *reverse*. Course 11 is

completed as an upward spiral about the limb, with *no reverse*, whilst course 12 would be a reversed spiral, coming from above downwards, across the front of the limb. Course 13 is similar to course 11; course 14, to course 12, and so on until the bandage is exhausted. This makes, then, a Figure of 8 Spiral of the Extremities with *alternate* reverses.

USES.—Similar to those for which the Simple and the Reversed Spirals are employed, and may be used on either the upper or lower extremity. It makes a very secure method of dressing, and gains this advantage through this fact: that the superficial courses (the reversed ones) rest upon cloth, and *not* upon the slippery integument, as in the case of the other bandages. The same advantage might be gained by covering an ordinary spiral with a second bandage—an ordinary Reversed Spiral.

This variety of spiral bandages is especially useful in plaster-of-Paris, starch, or other so-called immovable dressings; also in fractures, or other cases where extension is demanded, and where a long interim between dressings is desirable.

VARIETY.—If the bandage is composed of very extensible

FIG. 9.



Figure of 8 Bandage of the Extremities.

material, as very thinly woven flannel, so as to be easily "moulded to a part;" it may be made throughout *without a single reverse*. Each course of the bandage would then be a single figure of 8 about the limb; thus, turfs 7 and 8 would be simple circles of the limb; turn 9, an *upward* spiral, turn 10, a *downward* spiral, turn 11, an upward spiral again, overlapping turn 9; turn 12, a downward spiral, overlapping turn 10, and so on until the limb is sufficiently encompassed.

This also makes quite a firm dressing as the superficial courses of the bandage rest upon the flannel, and not upon the integument. It is used in cases similar to the preceding. It is known as the *Figure of 8 Bandage of the Extremities*, and can be applied as its name indicates, to either the arm or leg.

CHLORAL AS AN ANÆSTHETIC IN NATURAL LABOR.
By Dr. A. CHAUPPE. (*Annales de Gynécologie*, Mai, 1875.)

The points considered by the writer are :

1. *Obstetrical anæsthesia CAN be produced by chloral;*
2. *It is without danger to mother and child; and*
3. *In what cases, at what period of labor, in what doses, form, and by what channel it ought to be administered.*

I. The writer has collected thirty-seven cases of the use of chloral thus: "In thirty cases anæsthesia was *complete*; in five cases it was *almost* complete; and in two cases it was *not* produced." Twelve of these cases are given at length, a few of which are here given at random.

“ Case VI. L’hopital de la Charite ; service of M. Bourdon, Dec. 17, 1873 ; patient aged 23 ; labor commenced at midnight ; at 1 A. M., her pains were very severe. The cervix was dilated to the extent of a two-franc piece (quarter of a dollar) ; vomiting. Two grammes (about thirty grains) of chloral hydrate were administered, but this portion provoked vomiting anew.

“ 9.10 A. M. Two grammes (thirty grs.) of chloral were given per rectum.

“ 9.20 A. M. She commenced to sleep, although she cried out at the time of the contractions.

“ 9.40 A. M. A new injection of two grammes of chloral given. From this time the patient was calm, the contractions continued to be produced without pain till 11.30 A. M., at which time the delivery was completed. During the labor the patient awakened at the time of the contractions, but she did not suffer.

“ She left the hospital in perfect health at the end of eight days.”

“ Case VIII. Feb. 28. Mrs. V., æt. 22, primipara. Had been in labor since evening of the 26th inst. The cervix, dilated to size of a two-franc piece, was thin and rigid. Since the evening of the 27th inst. she had been in the same condition. She had had administered to her a tepid bath, opiates and emetics, without any result.

“ 8.05 A. M. Three grammes (45 grs.) of chloral hydrate given, the pulse beating 100 per minute.

“ 9 A. M. Sleeping. Pulse, 90.

“ 9.10 A. M. Patient continues sleeping. Pulse, 88.

“ 9.40 A. M. Patient is aroused for a moment ; she had a few slight pains and almost immediately sleep again supervened.

“ 10 A. M. Cervix in same state ; sleeping lightly.

“ 10.13 A. M. Patient agitated a little during a contraction. One gramme of chloral given. The patient had now taken four grammes in an hour and a half.

“ After the last dose she fell asleep again profoundly. The sleep was prolonged till 3 o’clock, at which time dilation was complete, and the expulsive pains commenced and delivery was rapidly terminated without pain. Recovery complete.”

“Case X. Rosalie B., æt. 25 years, primipara, in perfect health, arrived at full term without a single accident. The day previous, 3 P. M., she began to experience the first pains, which lasted throughout the night, causing her to cry out. At 8.30 A. M. on the day following, the cervix was completely dilated, the head, fixed, was engaged in the superior strait in the first position.

“The contractions were irregular and weak. The labor had not progressed since 5 A. M. Four grammes of chloral were given; the first two at once, and the last two separately, a quarter of an hour apart; after the second dose the patient slept and had only one contraction, which did not awaken her, between that and the third dose. After the fourth dose, powerful contractions came on very regularly every five minutes, without arousing the patient, and at the end of thirty-five minutes delivery was completed without her remarking it. At the moment of delivery she pretended not to have suffered and then fell asleep and slept five hours, waking perfectly refreshed. The sequences were as usual, and she left the hospital on the tenth day after confinement.”

“Case XII. Celeste K., æt. 24 years, primipara, entered the hospital Dec. 3, 1873; is at full term, which she reached without any accident. The pains began two days previous, and waters had escaped twelve hours previously.

“This woman, very nervous, was continually crying out and tossing about on the bed; she said she suffered much; contractions irregular; cervix completely dilated, breech presentation; first presentation at the superior strait.

“8.40 A. M. Two grammes of chloral given at once.

“8.45 A. M. No effect; two more grammes given.

“9.05 A. M. No effect; perhaps there is a slight tendency to sleep and the cries a little less violent, but the contractions are not at all modified. One gramme more given.

“9.15 A. M. A little tendency to sleep. One gramme more given.

“9.45 A. M. After the last dose the patient fell into a profound, very calm sleep; the pulse which had been 120 beats per

minute, fell to 80; respiration calm, but the uterus did not contract.

"9.50 A. M. Contractions violent, without arousing the patient. From this moment the contractions became regular and powerful; at first every six minutes, then every five minutes, and the delivery was consummated without intervention at 11.10 A. M. The patient was not conscious one moment. She slept till 2 P. M., at which time she awakened and said she remembered nothing, and had not suffered any. Recovery was rapid."

An attentive reading of the above given cases, will convince any one that this drug administered as shown, places in the obstetrician's hands a help scarcely second to chloroform, and one free from the objections of the latter, which every one knows "prolongs the labor" by rendering the pains less effective. The author claims for this drug, that it does *not* protract labor as chloroform does, but it positively *increases* pains, steadies irregular, ineffectual contractions, and at once converts them into forcible, expulsive uterine efforts. To carry conviction still more forcibly to his readers, the writer details two experiments, on bitches, performed by M. Pellissier. The dogs were fastened to the operating table, the abdomen opened and at first the contact of air sufficed to produce contractions of the unstriped fibres of the intestines and uterus. Pinching these organs produced violent muscular contractions. Into one animal chloral was injected until profound sleep was produced. "Anæsthesia was complete; the nose and tongue were pinched without producing a single movement." Slightly pinching the uterus produced contraction promptly. Into the other bitch laudanum was injected subcutaneously; soon "very profound sleep, with dyspncea, was produced." Upon pinching, the intestine and uterus contracted, "but they had to be observed with the *utmost* attention to see these contractions, since they were *scarcely perceptible*." After these experiments both animals recovered; this fact is mentioned purposely, to assure any incredulous reader that these experiments were not prosecuted on moribund subjects.

Obstetrical anaesthesia involves two points, viz., *abolition of suffering* and the *maintaining the integrity of the uterine contraction*. The former any observer will concede. As to the second point, the writer triumphantly remarks: "Case XII, for example, is one of the best examples we can take. What does this case show us? We have a very nervous, fatigued woman; the presentation is bad, the labor of long duration; the pains succeed each other rapidly and are ineffectual. Chloral is given. Immediately the uterus ceases to contract, and, one would believe, that, at the same time, that anaesthesia is induced, the medicament had arrested the uterine contractions. But the illusion is not of long duration; to the painful, powerless contractions which the patient suffers, regular energetic contractions succeed; which are produced without pain, and in a short time, accomplish the expulsion of the child. If we analyze the twelve cases, *in extenso*, we see, with few exceptions, the same thing produced in all the cases."

"We now believe it to have been fully established, that chloral hydrate, which is capable of producing in the highest degree, cutaneous anaesthesia, can as effectually produce an annihilation of the pains of confinement; that suppression of pain is not due to the diminution of uterine contractions, either in their intensity or frequency; that the latter (the pains) upon the contrary conserve their power; that they seem for a few moments to be retarded, and that what they lose in frequency they gain in force. This important verification explains why some authors have believed that chloral acts directly upon the uterine fibres as an excitant; it explains why M. Lambert, without enunciating a similar opinion, could terminate his essay by saying, 'that by the use of chloral, labor is not only *not* retarded, but it is often accelerated.'

II. *Effect on mother and child.*

It is well established that chloral does not diminish the contractions nor retard labor. M. Pellissier has always examined with great care the children born of chloralized mothers, and "has never seen the former show in the least degree the effect

of the hypnotic and anæsthetic agent. He has never seen the milk of the mother, given to the infant almost immediately after birth, produce the least hypnotic effect." He affirms, after using it many times, that "chloral administered in a prudent manner and in proper doses, is an agent of absolute innocuity."

The author has been impressed with the "rapidity of recovery" of the women, chloralized. He admits that his collection may have been a "happy series" of cases, and this rapidity exceptional, rather than the rule. If it be the latter, he suggests two solutions, inclining to the latter. 1st. It may be owing to the escape of the mother from the great fatigue of labor. 2nd. It may be owing "to the destroying or neutralizing of the septic products absorbed by the placental wound." Since chloral solutions are applied to ulcers and wounds on account of the antiseptic, antiputridic properties of the drug which are now well established, the author suggests that, during the first few hours after expulsion of the foetus, the chloral in the blood acts as a disinfectant. He advances this suggestion "with the most extreme reserve," and promises to make this point a special study.

III. *In what cases, when, in what doses, and by what channel ought it to be administered.*

"Chloral ought especially to be given in too prolonged confinements and in primiparas, for then the pains have an intensity that will be found only exceptionally in ulterior confinements." "It often occurs that, the pains being very intense, the patients, when they are nervous, are exhausted by their inutile efforts, and that at the moment when they are especially need all of their forces for the last expulsive pains, they are fatigued, and the womb ceases to contract. In these cases, chloral, which procures repose and rescues the women from exhaustion, would be expressly indicated."

"It will be still more appropriate in nervous women, who toss about and complain beyond measure. If anæsthesia can be induced in such patients, the moment of delivery will be remarkably hastened."

"In hysterical females, who are so often attacked at the moment of parturition, chloral can be used with success."

After pains can be controlled with chloral.

At what time of labor ought chloral to be used? As a general proposition, the author would recommend that it be given "when dilatation is complete, and when the expulsive pains have commenced." "It is only in very rare cases and when the woman suffers much that we would be authorized in giving it during the period of dilatation."

The dose will vary, "according to the moment of giving it, the susceptibility of the patient and the effect desired." The dose varies from 60 to 80 grains, given in 30 or 40 grains, at an interval of 30 minutes, or, in 15-grain doses every 15 minutes, till the effect is produced.

When the stomach will not retain it, the rectum should be resorted to. The hypodermic and intravenous uses of chloral the author would not recommend.—*Chicago Med. Jour. and Examiner.*

CLINICAL LECTURES ON DISEASES OF WOMEN. By Prof.
T. GAILLARD THOMAS, M. D.

The first patient who appears before us to-day, gentlemen, is Mrs. C. P., thirty-two years of age, born in Germany; has been married eleven years, and has two children, the youngest of which is seven years old. Since the birth of this child she has never been pregnant, and dates her present illness from it.

She comes here to-day in search of relief for the following symptoms: pain in head, back, and limbs; a sense of fatigue and exhaustion, and a feeling of general debility; her menstrual periods are painful and irregular; she suffers from leucorrhœa, which is at times very profuse, constipation, and at times considerable irritability of the bladder. In spite of these symptoms, however, she tells us that she "drags around," and attends to her ordinary avocations.

Before proceeding to more important points, let me draw your attention to the perfectly simple and straightforward manner in

which this woman tells her story. You will notice that there is a great difference in this respect among patients; some exaggerate their symptoms, others make as little of them as possible. This patient belongs to the latter class, and impresses me as one who underrates rather than overrates them. We have already heard enough to make us suspect that some abnormal condition exists in the pelvic organs as the source of Mrs. P.'s ill-health, and we at once proceed to an examination of them.

Physical Examination.—Always place the patient upon a table or *hard* surface when you examine upon the back, otherwise the buttocks will sink down and render examination difficult; place the feet on a chair, or drawn up on the edge of the table; cover the table with a blanket and sheet; have at hand a basin of water and a piece of soap, rather than lard or oil; these are more difficult to obtain, are often rancid, leave a disagreeable odor on the fingers, and render the sense of touch less delicate than soap does, which is always at hand. Lubricate the left index-finger. Have the clothing above the patient's waist loose, so as not to press the uterus down into the pelvis.

Passing my finger into the vagina I examine the cervix. Instead of feeling the normal os, it passes up to the os internum and I feel a large, roughened surface, covered over with granulations. At once I diagnosticate a condition which is commonly regarded as, or rather mistaken for, granular degeneration of the cervix, but what is in reality a laceration of this part, which occurred with the exit of the child's head from the uterus. Now, practising conjoined manipulation, I find that the uterus is large, heavy, and anteverted. Separating the labia majora, I discover further that all sphincteric action at the ostium vaginæ has been destroyed, that the perineal body has been rent in two, and that the vagina, large and flabby, has prolapsed, both as regards the anterior and posterior wall. Rectocele has not occurred as a result of the prolapse of the latter, but cystocele has followed that of the former.

Changing the position of the patient from back to the side, I introduce the speculum, and the moment I lift the lax posterior wall, a red or raw looking surface comes into view. Taking

the probe, and bearing in mind the anteversion of the uterus, I pass it into the fundus, and find that the uterus measures three and three quarter inches instead of two and a half inches.

Now, let me recapitulate for you the abnormal conditions existing in this case, and see how they account for the sterility of seven years' duration, the weakness, pain in head, back, and limbs, leucorrhœa, irregular and painful menstruation, and vesical trouble of which the patient complains: 1. We find the woman suffering from laceration of the cervix uteri; 2. From anteversion of a large, heavy uterus; 3. From rupture of the perinæum; and, 4. From prolapse of a large, lax, and enfeebled vagina. You will begin to think that I am opening before you a perfect Pandora's box, and not only is every condition which I have mention readily to be discovered, but the pathological combination which is here presented to you is one of very frequent occurrence. I need not tell you that it is sufficient to account for every symptom of which she complains; pain, disordered menstruation, derangement of the nervous system, and leucorrhœa.

Let us now proceed one step farther, and connect the present combination of abnormal conditions with the parturient act, which occurring seven years ago, changed this woman from a strong, robust person to the suffering invalid of to-day. As the child's head passed through the cervix uteri, this part was lacerated on both sides, and at once the hitherto healthy woman was exposed to great dangers of puerperal septicæmia. Upon asking her about her convalescence after delivery, she said she "was very bad" with "milk-fever" for seven days, and that her friends thought that she would not live; also, that during this time she had no milk. Now, what she calls "milk-fever" was really puerperal fever. After the birth of the child, the lochial discharge from the uterine mucous membrane, pouring over these lacerated surfaces, was absorbed, and the septic material poisoned the system. This is very likely to occur, just as one of you may absorb septic material through a cut on the finger while dissecting. The uterus, after the child's birth, undergoes fatty degeneration, and by this process returns to its original

size. But, in this case, owing to the ruptured cervix, this process was but partially performed, and instead of a womb which measures two and one-half inches there is one which measures three and three-quarters.

As the uterus increases by a species of physiological hypertrophy during utero-gestation, and undergoes involution after parturition, so does the vagina and so do the uterine ligaments. Were it otherwise, the child's body, being expelled even before the full term, would inevitably lacerate the former, and every parturient act would be followed by uterine displacement from inefficiency in the latter. The rupture which has ~~here~~ occurred in the perinæum has prevented involution of the vagina, as cervical rupture has interfered with the same process in the uterus; and thus we have now to deal with a uterus larger than normal on account of sub-involution and tending to fall from its position, not only from its own increase of weight, but because it is dragged upon by an abnormally heavy, sub-involved vagina, the lower portions of which falls out of the pelvis because rupture of the perinæum has destroyed the sphincteric action of the ostium vaginalæ. As the bladder rests upon the anterior vaginal wall, prolapsed of this has resulted in cystocele, which has helped to pull the fundus uteri forward and to establish anteversion. The prolapsed vagina is one reason why the patient is unable to walk without fatigue. The pain in back is due to displacement, and to the fact that the delicate lining membrane of the lacerated cervix is everted, and so exposed to friction in moving, during sexual intercourse, etc., that it causes pain, just as a man accustomed to wear shoes suffers pain when walking barefooted. This also causes some leucorrhœal discharge. The latter, however, is in a great degree the result of uterine engorgement consequent in part on the cervical laceration and in part due to displacement. This engorgement creates and perpetuates general nervous disturbance.

Now, gentlemen, this is a type of a large number of cases; they are very common, and I do not apologize for dwelling upon it. I expect to show you more of them this winter. You will not be able to cure them unless you find out where the trouble

lies. This woman has probably been to eight or ten physicians. (To patient)—“How many doctors have you seen during your illness?” “Nine or ten.” And, like another patient we have read of, she “was nothing bettered, but rather grew worse.” Let me tell you of the experience of many of the unfortunate women affected like our patient. The invalid calls on Dr. A. Dr. A. examines her and finds an “ulcer,” which he treats for a long time with the nitrate of silver, and gets something like a mucous membrane to form over it, and the “ulcer” is almost cured, but the patient is not, and so she goes to Dr. B., who finds a displacement of the womb,” which he replaces and keeps up with a support; Dr. C. in time finds the ruptured perinæum; Dr. D. later makes the diagnosis of prolapsed vagina; Dr. E. of cystocele, and so on through the number.

There is but one way in which success can be obtained in the treatment of these cases. He who hopes to cure them must view them from a broad, comprehensive, philosophical standpoint which enables him to grasp not one link in the morbid chain, but the continuation of evils which act and react upon each other.

In the instance before us, to what symptom must we first address our attention? How shall we treat this case? Let us begin with the congestion of the uterus. The return circulation is deranged by the malposition; the arteries carrying the blood more quickly than the veins can take it back, the organ is engorged; hence I should replace the womb in order to allow a free venous return, in the hope that the effect of that displacement, the congestion, would disappear after congestion had been lessened by this removal of one of its mechanical causes. Probably, in a fortnight or three weeks, I would etherize the patient, pare the edges of the cervical lacerations after Emmet’s method, and sewing them together I should expect in eight days the “large ulcer of the cervix,” which eight months of cauterization could not cure, to disappear entirely. The uterus under these two influences would rapidly become smaller, lighter, and less “irritable.” Vesical irritation would diminish and vaginal circulation would become freer, because less impeded by pres-

sure upon the veins at the upper part of the vagina. Now I should replace the annihilated perineal body. This would remove tendency to prolapse of the posterior wall, and, by firmly sustaining the anterior, remove that to cystocele.

By this time many of the symptoms from which this patient now suffers would be relieved, and all of them would be benefited. True, sub-involution of uterus and vagina would still exist, but having removed the prolonged congestion which had existed in these parts, both conditions would be robbed of many of their evil consequences.—*N. Y. Med. Journal.*

LIGATION OF A MAIN ARTERY, TO ARREST ACUTE TRAUMATIC INFLAMMATION.

Mr. C. F. Maunder's third term lecture, in the recent Lettsomian course on the "Surgery of the Arteries," is devoted to this subject. The theory on which this treatment is based is, that after severe injuries, the inflammation, in some cases, far exceeds, in grade, the amount which is necessary for, or compatible with, the reparative process, and that the usual antiphlogistic remedies fail to arrest it. If vigorous measures be not adopted, either prolonged and exhausting suppuration, or extensive gangrene results. In such cases Mr. Maunder, in 1866, recommended diminishing the supply of blood to the part by the ligation of the main vessel of the extremity involved, and the practice was followed by the happiest results.

The following facts and conclusions are quoted from his lecture :

That ligation of the superficial femoral artery has arrested acute inflammation consequent on wound of the knee-joint.

That ligation of a main artery will quickly diminish profuse suppuration, and prevent death by exhaustion.

That, while it arrests profuse suppuration, it will, by allowing the patient to gain strength, afford an opportunity for amputation at a future time.

That gangrene and secondary haemorrhage, as the result of ligation, should not be anticipated in the healthy subject.

That the dread of these has arisen from our knowledge of the

consequences of the ligature in instances of known diseased vessels—aneurism, for example.

That a slough on the heel, caused by the pressure of a splint, was quickly detached, and the wound soon closed, although the superficial femoral had been tied a few days previously.

That symptoms of inflamed bone ("starting-pains") quickly disappeared.

That the arterial tension of the rest of the body will be increased beneficially by the ligature.

In conclusion, the lecturer stated that he had long supposed that he was the first to suggest this method of treatment; but research into the literature of the subject had shown him that it was practiced in America long before he was born. It was done for the first time by Henry U. Onderdonck, M. D., in 1813, and afterwards by David L. Rogers and Valentine Mott, of New York City, of which facts Mr. Mauder was, in 1866, entirely ignorant.—*London Lancet.*

PATENT MEDICINES.

During the past few years the South and West have been flooded by the advertisements of a so-called Dr. Pierce, and from the sale of his "favorite prescription" and "golden discovery" a tide of wealth has flowed into his pockets. We give the following formulas from an analysis made by Hager :

DR. PIERCE'S FAVORITE PRESCRIPTION.

	Grammes.		Grammes.
Savin.....	10	Sugar.....	5
Agaric.....	5	Tinct. Digitalis.....	2
Cinnamon	5	Tinct. Opium.....	2
Peruvian Bark.....	10	Alcohol.....	25
Boil with water to.....	220	Oil Anise.....	gtt. viij
Add Gum Arabic.....	10	M.	

DR. PIERCE'S GOLDEN DISCOVERY.

	Grammes.		Grammes.
Honey.....	15	Alcohol.....	100
Lactucarium	1	Water.....	105
Tinct. Opium.....	2	M.	

—*American Practitioner.*

POST PARTUM PILL.

Instead of the regulation dose of castor oil, after parturition, the following pill is employed at Bellevue Hospital :

R Ext. Colocynth Comp.
Hydrarg. Sabmuriat.....aa. *iiiij.*
Ext. Nucis Vom.
Pulv. Aloes.
Pulv. Ipecac.....aa. *grs. xx.*

M. et div in pil No. cxx. One to four to be taken at a dose.

—*Medical Record.*

GELSEMINUM SEMPERVIRENS AS A REMEDY FOR COUGH.

Dr. J. Roberts Thomson, M. R. C. P., physician to the National Sanitarium for Consumption and Diseases of the Chest, Bournemouth, writes to the *British Medical Journal* : No symptom in pulmonary complaints more frequently calls for treatment than cough. The skill and the resources of the physician are alike taxed by its persistency or severity, by the failure of medicines to relieve or by the intolerance of remedies by the patient. In most cases the symptom is so urgent and harassing that we must treat it. For this purpose I believe we have in *gelseminum sempervirens* a very valuable addition to our armamentarium. Of late, this drug has received some attention in this country, with reference to its action in nervous affections, but, so far as I know, little has been said with regard to its use in coughs. I have administered it recently to a large number of patients suffering from pulmonary disease, as a cough sedative." Six cases are cited in support of this statement, in which the administration of five to eight minim doses of the tincture were markedly beneficial.—*Medical and Surgical Reporter.*

HOW TO TREAT A COMMON COLD.

Dr. J. M. Fothergill, in an article on this subject in the London *Practitioner*, remarks :

Rarely is any impression made upon the pyrexia until the action of the skin is excited and the cooling effects of exhalation attained. The administration of nauseant diaphoretics to attain

these ends has been the rule among practitioners and housewives. The time-honored antimonial wine has scarcely yet yielded to its rival, ipecacuanha; nor, perhaps, is it desirable that it should. Their combination is good and to be recommended. In adults, iodide of potassium in guaiac mixture forms an excellent combination, especially when the cold is combined with rheumatic pains or tonsillitis. The internal remedies may be aided in their action by external measures, such as warm baths. With children it is easy to wrap them up in a blanket wrung out of hot water, to enclose them so wrapped in a dry blanket, and to put them into bed. This may be repeated as required, and sufficiently aids the remedies given by the mouth. Measures for giving adults a warm bath in bed are now to be procured at little cost. After perspiration is once induced, there is usually a gradual fall in the temperature; but the normal may not be reached for some days. There is a decided tendency to excessive heat-loss after the action of the skin has been established, even though the temperature indoors be above the normal. Experience has taught humanity to wrap up well when passing through a cold, especially when it is breaking. Ere the action of the skin is re-established, the impression of external cold is grateful, but afterward chills are readily experienced. The increase of blood in the heat-losing area permits of rapid heat-loss. When a cold is caught during the restorative period it is usually a fixed one, and not rarely serious illness is the consequence.

When the action of the skin is re-established, it not uncommonly happens that perspiration is profuse, even while the patients wrap up well to shield themselves from heat loss. This is a troublesome stage in the history of a cold. Here mineral acids with vegetable tonics are indicated, and perhaps, best of all, dilute phosphoric acid in cascara or cinchona. In the treatment of influenza, vegetable acids along with a bitter tonic should be given.

In the treatment of the bronchial affections which so commonly accompany an ordinary cold, it is not a matter of indifference what expectorant remedy is selected. As long as the

skin is dry, and the bronchial lining membrane tumid, and secretion arrested, ipecacuanha with acetate of ammonia is indicated; or a little antimony may be added with advantage. When the skin is once thrown into action and the bronchial secretion also established, then acids with syrup of squills are suitable measures. But it is not a successful plan to administer squills with acids until the skin is moist. When there is a tendency to the free action of the skin, this latter combination in full doses is a useful plan of treatment. Neither is the union of carbonate of ammonia and senega, in severe cases, indicated until the secretion alike of the skin and the bronchial lining membrane is thoroughly established.

Ars, ante omnia veritas.

Editorial,

HOMEOPATHY AND DR. GERRISH.

With the utmost willingness we accede to Dr. Gerrish's request and publish in another column his letter, in which he attempts to destroy the effect of the unfavorable reference to him which in a recent issue we felt called upon to make.

The Doctor is evidently well satisfied with his own plea; and so far we congratulate him; but will his friends, or will the impartial and disinterested outsider be able to see the matter from the Dr's point of view? We fear not.

His only apology for intruding his thoughts on the attention of the profession, was the fact of his knowing *everything* about the subject which he undertook to discuss and exhaust. "My information," he says, "has not been obtained from uncertain rumors and hearsay reports, but from official documents."

Now that Dr. Gerrish was in error when he wrote this prelude to his tirade on homœopathy in the University of Michigan, will be quite apparent to any person who will take the pains to study the circumlocution and the special pleading by which he now en-

deavors to vindicate the assertions contained in his letter to the *New York Medical Record*.

The attempt to defend his statement in regard to "Dr. Sager's scheme" is simply absurd. Every member of the medical faculty, every member of the board of regents, and every intelligent individual who really knows anything of the matter at all, will tell him that Dr. Sager's plan was, in point of truth, absolutely an *after thought*; and that it was *never mentioned* until all parties were committed to the present plan.

Dr. Gerrish in his authentic (?) letter avers that Dr. Sager's resignation was "*prompt*" and he states *motives* by which Dr. S. was actuated. In his defence it will be seen that he attempts to explain *why* Dr. Sager's resignation was *in reality not prompt*, and still he attempts to justify his use of the expression. As to the motives which actuated Dr. Sager in sending in his resignation, we might appeal to the original document to contradict Dr. Gerrish's published opinion that "believing that the plan adopted compromised the professional honor of the faculty, he promptly resigned his office." In that original document will be found these words: "I have been admonished officially, as well as otherwise, that for the liberty of expressing publicly views at variance with those of the honorable Board of Regents, yet in vindication only of the purity and prosperity of the old school in the medical department, I have exposed myself to their displeasure and rendered myself obnoxious to censure."

Here was the real and immediate cause of Dr. Sager's resignation. Eye witnessess of, and co-actors with Dr. Sager in these transactions, assure us that his resignation would never have been thought of had it not been for the perhaps injudicious and questionably proper action of a representative of the Board of Regents, who, disagreeing with Dr. Sager in his course, undertook to dictate to him. In short, *personal pique*, which we will not say was unjustifiable under the circumstances, precipitated Dr. Sager into a violent course of public conduct which, with all our veneration for the man we cannot help condemning.

Now it is quite clear that Dr. Gerrish was far from being fully informed on this point, and still he professed to have his information from sources which were unimpeachable.

We have no space to discuss this matter further at present. If the language of our rebuke appeared to Dr. Gerrish unexpectedly severe, we can only say that he has himself to blame, and in conclusion we assure him that in spite of the acrimony of this discussion, we cherish the belief that, rash and unjustifiable as his action certainly was, the motives by which he was influenced were such as would bear the strictest scrutiny.

Dr. SAGER in referring in a communication to a contemporary, to our editorial review of Dr. Rynd's article on the homœopathic question in our December number, seeks to counteract the effect of our criticism of his procedure in the matter, by charging the authorship of the editorial on the Professor of Surgery at the University. We are very loath, indeed, to deny Dr. Sager any satisfaction which he may derive from such a reflection, but we must assure him that his suspicions are without the shadow of a foundation in fact.

With a similar object in view, he insinuates that the publication of Prof. Gross' letter (the one of which he himself made such unwarrantable and unauthorized use) was prompted by the last sentence it contained : "A man of your talents and reputation cannot remain long idle or unemployed in a country where such qualities are so much appreciated as they are with us." This is certainly a compliment of which, considering its source, Prof. Maclean may well be proud, and that it is not undeserved his record is sufficient evidence. Were it not that this gentleman is a comparative stranger in this state, we should be content to leave that record stand as a fitting rebuke to him who is driven from argument to such questionable straits. No man knows better than Dr. Sager, the unfairness, injustice, and groundlessness of such an insinuation, and we are extremely sorry that in the heat of discussion, he has apparently forgotten that courtesy which his relations to his former colleague should have ensured.

For Dr. Sager's information, we might state that the letter in question was by solicitation placed in our hands, as it once was in his, and that its publication by us was not without permission.

THE JOURNAL FOR '76.

We are pleased to be able to announce that our arrangements for the centennial year are such as will materially enhance the usefulness of the *PENINSULAR JOURNAL*. Heretofore we have labored under the serious disadvantage of a lack of space; with the enlargement however, which dates from the present number, this draw back will be in a great measure overcome. We are very thankful indeed for the encouragement which our efforts in independent medical journalism have met during the past year; and with the past as a guarantee for the future, we shall as heretofore, untrammelled by any extraneous influence, endeavor to represent faithfully the interests of the profession.

We have made several valuable acquisitions to our corps of contributors. Prof. Prescott of the University has taken charge of the department of Chemistry and Pharmacy, thus adding to the *JOURNAL* a fresh attraction to druggists and to such physicians as from necessity or choice dispense their own medicines. Prof. Palmer will furnish each month a clinical lecture and Prof. Maclean will continue the reports of his clinique. We have the promise also of such a supply of original communications from the profession throughout the State, as will ensure to our readers a first class home journal, while especial attention will be paid to a digest of what is transpiring abroad.

Inasmuch as the expense consequent on our enlargement, has been very much increased, we trust that there will be no delay on the part of subscribers in remitting the much needed subscription price. While we shall endeavor faithfully to do our part, we look to the profession, who, not less than ourselves, should be interested in the success of enterprizes of this nature, to do its part; and while a liberal supply of literary contributions is indispensable, a not less essential ingredient to success is a prompt remittance of the annual subscription fee. We trust that this gentle reminder will be sufficient, and that we may be saved the trouble and expense of sending out accounts.

THE
PENINSULAR JOURNAL
OF MEDICINE.

FEBRUARY, 1876.

Original Communications.

A CLINICAL LECTURE ON PARESIS, OR FAILURE OF MUSCULAR POWER. (Second lecture.) By A. B. PALMER, M. D., Prof. of Pathology and Practice of Medicine, in the Department of Medicine and Surgery of the University of Michigan.

GENTLEMEN.—At a former lecture I referred to seven cases which had recently been under our observation, where loss of muscular power was a prominent symptom, each however presenting quite a different history, and scarcely any two of them depending upon the same pathological conditions.

It is true the third and fifth cases were thought to depend upon *sciatica*, but this term has not a fixed and invariable pathological significance, and the cases differed in so many respects that the affections could hardly be regarded as the same. The others were all widely different in their pathological conditions, and even the symptom of loss of muscular power varied greatly in character, extent and degree.

We see illustrated in these cases the fact that *paralysis* is a

symptom—a phenomenon dependent upon different pathological lesions.

Before commenting further upon these cases, allow me to ask your attention to the causes which may produce a want of muscular power.

You of course understand that muscular motion depends upon certain conditions of muscles, nerves and a nerve centre. In every muscular motion there is then concerned a centre of vesicular neurine, which is a seat of power, a nerve fibre which conveys that power, and a muscle capable of contracting under the influence of that power.

In the higher animals—in man, the seat of voluntary power is in the gray matter of the brain, though the spinal marrow furnishes a centre of reflex and automatic action; but the chief function of the spinal cord, so far as it is concerned in voluntary motion is to conduct the power from the brain to the nerves, and through them to the muscles.

A cause of paralysis then, may be in a morbid state of either gray or white nervous matter in the brain, it may be in the spinal cord, in the nerves, or in the muscles themselves.

The special conditions resulting in deficient muscular power, following Dr. G. V. Poore in an article in the "Lancet," may be: 1st. Want of education in a muscle, a want of practice and exercise of the muscle, especially when such want continues for generations, as in the case of the muscles attached to the lobes of the ear—and any muscle which for a long time is unused loses more or less completely its power.

2d. Muscles may fail in their action from want of will-force. The nerves and muscles may be in a state of integrity while the will power is not supplied. This may arise from absence, or structural disease of the proper nerve centre, or from functional inactivity of such centre. We have examples in the absence of the proper brain matter in cases of congenital paralysis and idiocy, of disease or lesion of nerve centres, as in apoplexy, and in blows upon the head, and of functional inactivity in hysterical or emotional paralysis.

3d. The nerve communication between the will-force in the

centre and the muscle may be deficient—may by disease, pressure or mechanical lesion be obstructed ; and this obstruction may be in the white or conducting part of the brain, caused by embolism, apoplexy, degeneration, etc., or from changes in the spinal cord, from pressure, disease or lesion of some kind ; or the obstruction may be in the course of the nerves distributed in the muscles, after branching off from the brain or cord.

4th. Lastly, the condition resulting in failure of motor power may be in the muscles themselves. From defective nutrition of the muscle resulting in atrophy, from rheumatic inflammation and its results, from excessive exertion, rupture of fibres or other lesions paralysis may be produced.

In examining a case of paralysis, the first thing after ascertaining the existence of the symptom is to ascertain the cause or the pathological condition producing it; the seat of the lesion and the particular character of that lesion ; and then we shall be prepared to form our indications for treatment, and to consider the means of fulfilling that indication.

In the cases presented to your attention at the clinic and in the hospital, and referred to in a former lecture, the loss of power in case first, was chiefly from failure of nutrition in the muscles of the lower extremities, combined however with a feebleness of nervous supply ; case second, was from a lesion existing from infancy, probably in the spinal cord ; cases third and fifth were from disease in the course of the sciatic nerves ; cases fourth and sixth from lesions in the brain ; but each of these latter from different causes, one from hemorrhage, and the other from a former inflammation ; while case seventh, Mr. G. C., who was brought in here so extensively paralyzed, the lesion was in the upper dorsal and lower cervical portion of the spinal cord.

I wish now to call your attention to some pathological principles which this last case illustrates and confirms.

Where the outer or peripheral termination of the nerves is no longer in connection with their nerve centre, or where they terminate in a diseased and inactive or effete part of the brain or cord, we have what is called *peripheral paralysis*.

When the paralyzed nerves are still in *communication* with a

healthy portion of nerve-centre in the cord or brain—when they enter a portion of brain or cord not itself diseased or effete, the morbid cause or lesion being higher in the cerebro-spinal axis than the point where the nerve enters the cord or brain, we have what is called *central paralysis*.

For example, in lesions of one corpus striatum from hemorrhage or other cause, we have hemiplegia—paralysis of one half of the body vertically. But other portions of the brain, the whole cord and the nerves being healthy—the parts where the nerves terminate or enter the cord or brain being sound, we have *central palsy*.

—Where a certain part of the cord is injured, compressed or diseased, but where the parts below in which most of the nerves concerned in the paralysis originate, are in themselves healthy, we also have *central palsy*.

The spinal cord although a conductor of influence from the brain, is not entirely passive. It has active functions of its own, it exerts an influence upon the nerves which pass out from it, and these nerves remain healthy while connected with a healthy cord, or a healthy part of the brain. But when terminating in, or passing out of a diseased part of the cord or brain, the nerves undergo morbid changes—when the cord ceases to exert an influence upon a nerve terminating in it, that nerve degenerates ; or when the diseased cord exerts a morbid influence upon a nerve terminating in it, the condition and function of that nerve are perverted.

Paralysis, or morbid conditions produced by such nerves, is called *peripheral palsy*—or peripheral disease. When, then, a nerve is cut or injured in its course, or diseased in itself or in its immediate termination in the cord or brain, we have *peripheral paralysis*.

When a nerve is cut off, the peripheral end degenerates, but the other—the proximal end—does not if connected with a healthy centre.

Peripheral degeneration, (which is chiefly fatty metamorphosis of the medullary substance of the nerve) of the fully severed part of the nerve is completed, usually, in from six to eight weeks. In

about three weeks the muscles supplied by it begin markedly to waste.

Electricity affects peculiarly severed nerves and the muscles supplied by them, and may be used to distinguish the part where the lesion causing a paralysis has occurred and the condition of the nerve supplying the muscles. For a few days after the section of the nerve it will respond, often actively, to the electric current; but where degeneration of the severed nerve has occurred, electric and Faradaic susceptibility diminishes, and in time is entirely lost—no contraction can be excited by a current.

When this susceptibility is once lost it is very slow to return—even response to the stimulus of the will may return in cases of repair of the injury, before the electrical susceptibility.

The proximal part of the nerve—that part centrally connected—will, however, respond to the electrical current.

With the *muscles* whose nerves are thus severed, response to *electricity* is gradually lost; but response to *galvanism* is not thus lost. These muscles are even more susceptible to galvanism than when in the normal state, and the quality of the effect is changed. It is slower in producing the impression, and that impression continues longer.

In *central* paralysis, where the nerves are immediately connected with healthy brain or cord, the muscles and nerves retain their comparative healthy condition and respond to all forms of electricity for a very long time.

At first—in the early days of hemiplegia, following cerebral haemorrhage, while active changes are going on at the seat of the lesion, there may be heightening of the response of the nerves and muscles to electricity. From long desuetude, however, the irritability may be moderately diminished, but generally there is no marked change of susceptibility of nerves or muscles to Faradaic or galvanic currents in true *central* paralysis.

This is an important fact as it will aid in the diagnosis of doubtful cases, and may afford very important indications for treatment.

Electricity and galvanism are now often used in paralysis,

therapeutically ; and I am sorry to say, not unfrequently with little discrimination—without proper scientific knowledge of its effects and the diseased conditions to which it is applicable—and as it is a powerful agent, when indiscriminately used, is as likely to do harm as good. Its use as a means of diagnosis requires knowledge of pathological facts, and if these I have mentioned be borne in mind, you will be aided in distinguishing between central and peripheral palsy.

We have peripheral paralysis with its degenerative changes in cases of *paraplegia*, where there are destructive changes in considerable portions of the cord—those nerves terminating in the effete portion of the cord undergoing the fatty degeneration spoken of—but paralysis of the parts supplied with nerves coming from the portion of the cord *below* the diseased part would be *central*, and such degenerative changes in the nerves would not be likely to occur.

In some forms of infantile paralysis, the nerves concerned terminate in a diseased cord, and hence they are peripheral; but in others a limited portion of the cord only is diseased, interrupting, however, more or less completely, communication from the brain to all parts below the lesion ; but most of the nerves terminating in the part of the cord not diseased in itself, the paralysis would be central, and this degeneration of such nerves would not take place.

Traumatic injury of nerve trunks causing paralysis is always peripheral ; so is paralysis from what is called “rheumatic thickening” of the neurilemma, or from any disease or pressure in the course of a nerve trunk. Lead paralysis is usually peripheral, and any peripheral paralysis when complete is followed by the degenerative changes in the nerves which have been described, and by failure to respond to electricity.

Allow me to refer again in the light of these facts to the case of Mr. C., whom you saw here so seriously affected. You will remember that all the parts supplied with nerves directly from the brain and the upper portion of the cord for a very short distance down, were in a state of integrity, the injury causing

the loss of power being below, in the lower part of the cervical and upper part of the dorsal region.

For some distance at this point the cord was in a morbid state, and the nerves belonging to the upper extremities terminated in this diseased portion of the cord. The part of the cord below this injured and diseased portion, we have reason to suppose was not of itself diseased; the paralysis of the lower extremities being produced by the obstruction of communication between them and the volitional portion of the brain, that obstruction being at the injured and diseased portion of the cord.

We had then in this case specimens of the two forms of paralysis—peripheral and central—the paralysis of the upper extremities being *peripheral*, and that of the lower, *central*. The nerves of the upper extremity terminating in a diseased part, those of the lower in a healthy part of the cord. But in neither the upper or lower extremities was the paralysis complete; the cord at no point was entirely effete, and destitute of all activity, but its function was greatly perverted and impaired. The impairment was chiefly to the motor tract, as the sensibility was much less affected, but even the motor function was not absolutely abolished, as there was some slight power of motion when you saw the patient, though it was so slight as to be of no practical use.

I called your attention to the rigidity of the muscles of the upper extremity, and to the absence of rigidity of those of the lower.

In this we have illustrated another pathological fact of great importance, and which I have not before alluded to in this lecture, viz: that nerves belonging to a paralyzed part, terminating in a portion of the spinal cord, or the brain undergoing active disease—where there is hyperæmia or inflammation, and where the part is not absolutely effete and destitute of active processes, are in a state of irritation; and although the muscles which they supply are not under the control of the will, they are excited and irritated by these irritated nerves, and are likely to be thrown into a condition of spasmodic contraction or

rigidity, such as you saw in the upper extremities of Mr. C. The nerves belonging to the lower extremities terminated in the lower part of the cord which was not in an active state of disease, and the muscles of these parts were not thus rigidly contracted.

Now if the conducting function of the diseased part of the cord can be restored, the nerves and muscles of the lower extremities would readily resume their activity, unless too much enfeebled by long disuse; but this weakness arising from desuetude could be overcome by friction, by electricity, by strychnine, and by exercise—passive at first, and active as soon as any voluntary power at all should be present.

At another lecture I intend to call your attention to the therapeutical principles which these pathological facts suggest, and particularly to the general rules which should govern in the use and avoidance of electricity and galvanism in the different forms of paralysis which you will encounter.

*NOTES OF CASES OCCURRING AT THE SURGICAL CLINIQUE
OF THE UNIVERSITY OF MICHIGAN, under the care of
DONALD MACLEAN, M.D., Prof. of Surgery. From the Graduation
Thesis of WILL. J. HERDMAN, M.D., now Demonstrator of Anatomy,
Michigan University.*

STRICTURE OF THE URETHRA — OPERATION — RECOVERY.— J. M., Hillsdale, Mich., aged 38, unmarried; presented himself at the clinique December 15, 1874, and gave the following history:

On the 9th of July, while driving a team attached to a wagon laden with a large log, the wheels of the wagon struck against the roots of a tree, rolling the log off the wagon in such a way as to wedge the patient between the tree and the log, causing fracture of the bones of the pelvis, also of the right femur at the upper third, and rupture of the urethra. Extravasation of urine took place into the tissues of the perinæum and scrotum, abscesses soon formed and were opened by his medical attendant and with the pus, urine escaped, and has continued to do so up

to the time of admission to hospital. The urine was also infiltrated into the tissues of the fractured thigh, in consequence of which there was non-union of the fracture and gangrene of the soft parts, so that amputation became necessary and was performed by Dr. A. F. Whelan, of Hillsdale, in May, 1874.

On examination, the following state of matters was found: The patient's vital powers seemed nearly exhausted, he was much emaciated, and complained of great weakness, hectic fever, night sweats, loss of appetite and depression of spirits. The urine, mixed with pus and blood, dribbled away persistently from three fistulous openings, one in perineo, one at the side of the scrotum, and one just below Poupart's ligament, on the amputated thigh.

Exploration of the urethra revealed a tight, unyielding stricture in the deep portion of the urethra.

The professor observed that in all probability the present deplorable condition of the patient is maintained by two causes, vis: 1st, stricture of the urethra, and 2d, exfoliation from the bones of the pelvis. Careful exploration with the probe failed to demonstrate the presence of dead bone, and a somewhat prolonged effort to introduce an instrument into the bladder through the strictured urethra was unsuccessful.

The direction of the urethra was found much changed by the deformity of the pubic arch, the results of the fracture, as well as by the long dense stricture.

The professor pointed out the necessity of overcoming the stricture as expeditiously as possible, with the hope that the urinary fistulæ would heal without further treatment, and if dead bone could be discovered its removal should also be effected if possible. The patient was ordered good, nourishing diet, combined with tonics and stimulants.

Violent irritative fever set in within twenty-four hours of the examination at the clinique, and for two weeks exhaustion from septicæmia seemed imminent. During this time local treatment was confined to simple attention to cleanliness. The constitutional treatment consisted in nourishing essences and the following prescriptions:

R	Potas. Chloratis.....	.....	3ii
	Acid. Hydrochlor Dil.....		
	Eth Chlorici.....	.....aa	3ss
	Vin. Ipecac .....	.....	3ij
	Syrupi Zingiberis.....	.....	3ij
	Aqua Camph. q s ad..	3vi
			M

Sig. One tablespoonful every fourth hour.

R	Spts. frumenti.....,.....	3i
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Sig. to be repeated three times a day.

On the 7th January, 1875 the patient's constitutional condition was much improved, and the professor, desirous of avoiding a recurrence of the bad consequences which had followed his former attempts to pass instruments, determined to perform a radical operation without further delay.

The patient having been placed upon a table and chloroform administered, a grooved staff was introduced into the urethra and carried down to the commencement of the stricture, but could not be made to penetrate it. Prof. Maclean now made a free incision down to the staff, laying open the urethra. Attempts were then made to carry the staff, catheters, filiform bougies, &c., through the narrow, tortuous canal which led through the strictured portion, but without success. A grooved director of very small size, and pliable, was then resorted to, and this, by careful and patient manipulation, was at last carried into the bladder, a fact which was demonstrated by the flow of urine along the groove; by carefully following the director inward with the knife the stricture was soon completely divided, and a full sized instrument was at once passed into the bladder. The operation consumed about thirty minutes.

Everything went on well after the operation. The wound gradually healed, the old fistulæ closed up, the patient recovered the full control of the function of micturition, and his general health improved with striking rapidity. Full sized instruments were introduced from time to time to prevent undue narrowing of the urethra as healing took place. On Feb. 13th he appeared at the clinique, and with the utmost facility introduced for himself a No. 12 metallic bougie, and as his general health seemed

to demand removal from the hospital he was now dismissed with directions to use his instrument periodically and to report his future progress.

On the ——— 1875, this patient once more presented himself at the clinique, but not on account of urinary trouble, as every vestige of that had long since disappeared and his general health excellent, although according to instructions he still continued to pass his bougie once a month. His only complaint now is of an obstinate and annoying sinus in perineo, which has no connection with the genito urinary passages, but which seems to depend upon the presence of dead bone in some deep and inaccessible region of the pelvis. No operation was deemed admissible, and he was advised to await future developments.

*NECROSIS, WITH ILLUSTRATIVE CASES—A paper read before
the Union Medical Society of Northern Michigan, by Dr. JNO AVERY,
Greenville.*

In fulfillment of the duty assigned me, to report a case or cases at this meeting, I have chosen the general subject of necrosis and the surgical interference necessary in this disease, with three illustrative cases, one reported in full and references to two others, all occurring in my practice.

I have selected this subject and these cases, not because I have anything new to offer or that any great or unusual difficulties were overcome in the operations necessary for relief, but because no subject or any class of cases offers a better illustration of the utility of conservative surgery; while, at the same time, none is better calculated to tax the knowledge, ingenuity and courage of the young and inexperienced surgeon. We are all of us, wiser in theory than in practice. We can demonstrate to a nicety the anatomical coverings of a strangulated hernia and count up the different structures to be gone through in an operation for its relief, but in practice, we are wise indeed, if, instead of giving relief we do not succeed in making an artificial anus for our patient. And so with the theory of necrosis, we may be so familiar, that we can afford to disagree with high and established authority upon the subject, and yet in operating, we

may mistake the living substance for the imprisoned sequestrum, and failing in our efforts to dissect it away, may be led to sacrifice a limb, that should have been made to do duty through life. It is then, more for the purpose of calling attention to the subject, than of any intention of throwing new light upon it, that I present this paper.

By necrosis, we understand the death of bone. The various causes which tend to produce this result, I shall leave to be learned from the text books.

The more superficial and exposed bones, such as the tibia, radius and inferior maxillary are the most frequent seat of necrosis, owing in part, no doubt, to their exposure and in part to the density and compactness of their structure; while the deeper seated bones and even the heads of the long and exposed ones are more prone to abscess or caries. By a wise provision of nature, when the disease, whether resulting from injury or from idiopathic causes, begins in the shaft of the bone, it rarely extends to its articulating surfaces but is arrested, at farthest, at its epiphyses, leaving its articulating surfaces, and the joints of which it forms a part, intact. On the other hand, when it begins in the articulating end of a bone it rarely involves any considerable portion of its shaft, but ends in caries or abscess of the head of the bone. Thus, while inflammation, either traumatic or idiopathic, seizing upon one of the deep seated bones or upon the spongy or cellular substance of the head of one of the long bones, will result in caries, the same injury or disease sustained upon the shaft of one of the long and more superficial bones, will end in necrosis.

The entire structure of a bone may become diseased and die; or the disease or injury may be limited to any section of its shaft, or, and perhaps most frequently, it may involve only a portion of its periphery. In the latter case, the dead portion is said to exfoliate; while in the former, when a whole shaft or a section of it perishes, the dead portion is called a sequestrum. The value of this distinction will be apparent when we come to consider the mode of separation and of the repair of the injury. Immediately upon the death of any portion of bone, nature sets

about separating the dead from the living part. This process, unlike that which resulted in the death of the bone, is often and indeed generally, slow and tedious. But nature always provident, at the same time sets up a process of repair, or the formation of new bone to take the place of the old and dead portion. And these two processes go on together, so that by the time complete separation is effected, nature has provided a substitute. In case of simple exfoliation of a superficial portion of the bone, the reparative process is carried on by means of granulations, springing up from the surface of the living bone, and tending constantly to push the dead portion through an external opening in the investing integuments, where it may escape or be removed by slight surgical aid. But when the entire shaft of a bone, or a section of it dies, the reparative process commences in the periosteum or in the surrounding tissues, so that nature in its efforts to provide a substitute, often, and in fact generally, encases the old and dead portion in a tomb of new and living bone, from which it can never escape except through the aid of surgical skill.

When necrosis is fully completed, the first indication to be fulfilled in all operations for its relief, is the removal of the dead portion of bone. This, in simple exfoliation, is generally a very easy matter, requiring only the enlargement of an opening through the soft parts to an extent sufficient to permit the extraction of the offending portion of bone. In case of a necrosed section of a shaft, while the dead portion is generally enclosed within the new bone, yet an opening will often be found, either at one or the other extremity, of sufficient size to permit without much difficulty the removal of the sequestrum. When this opening is too small to permit the ready extraction of the dead bone, it may easily be enlarged by the use of a strong cartilage knife, cutting pliers, or chisel and mallet. But in case of the death of the entire shaft of a bone, the difficulty is very much increased, and the limb may present a formidable appearance. The sequestrum is found completely encased in the new bone, and in place of the large opening before described, we usually find several small ones, and these will be rounded and polished

as if for permanent use. Through any one of these openings the old dead shaft may be felt, not only useless but an offending substance, whose presence nature continually resents and tries in vain to expel. The surgeon's duty here as in the other cases, is to aid nature in her efforts to remove the dead and offending bone. For this purpose an incision is made through the soft parts down upon the new bone, where, seeking one or more of the small openings which will generally be found on a line with the openings through the soft parts, the surgeon proceeds to enlarge one, or to cause two or more to coalesce, to an extent sufficient to allow the removal of the entombed sequestrum. It may sometimes be necessary to open the new bone through its entire extent; but generally one long opening at the larger end of the shaft, will enable the surgeon, with a strong pair of forceps and careful manipulation, to give the required aid. It may sometimes be necessary to break up the sequestrum and remove it in pieces; but whatever difficulties are encountered, by patience, courage, perseverance and a moderate amount of skill, we will be able to overcome them all, and succeed in our efforts at relief.

It is well for us to remember that however unpromising a case of necrosis may appear, it is hardly ever so bad as it looks. And it is surprising how appreciative nature is of the surgeon's aid in these cases, seconding his efforts at repair, with an energy truly marvellous, not only in restoring the wasted system to its wonted health and vigor, but in converting in an almost incredibly short period of time a swollen, suppurating and offensive limb, into a shapely and useful member. And it is a pleasing thought to the surgeon as well as to his patient, that, while too often, the only mementoes of his skill are the empty sleeves and wooden legs and crutches of his patients, in this class of cases, he is able to exercise his art and afford relief without maiming or deformity.

Amputation, as the result of necrosis, may sometimes be necessary, though I believe the cases are so rare as to make it almost unnecessary to note an exception to the rule, that the surgeon's duty is to remove the dead bone, and save the limb. Extensive sloughing of the soft parts, involving important blood

vessels and nerves; disorganization of large joints, like the ankle and knee, and extreme constitutional disturbance, as hectic, may sometimes demand the sacrifice of a limb. But the surgeon fails in his appreciation of the high aims of conservative surgery, who hesitates between the removal of the entire shaft of a bone and the permanent mutilation of his patient. Happily, upon this point all authorities agree. Dr. Gross, says: "It is not often that the surgeon is not able to effect a good cure in necrosis; in general, even with little deformity and loss of function." And upon the question of amputation, he says: "it is impossible to exercise too much caution in attempting to decide so important a matter, for we must not lose sight of the fact that cases, apparently of the most forlorn character, where life literally hangs as it were, by a thread, will sometimes promptly recover upon the removal of the dead bone. Finally it must not be forgotten that excision of an entire bone has often been advantageously performed, especially of late years, recovery taking place with comparative little deformity." Dr. Miller says: "amputation is sometimes demanded, though rarely in necrosis. It is the exception not the rule," and that "it is a great happiness to remember that a large majority of the most unpromising cases are prosperous in their issue, if duly conducted; the system which has borne up long, is enabled to sustain its task to the completion; the dead part is separated and discharged," or removed; "the substitute condenses and solidifies; the swelling of the soft parts subsides; purulent formation diminishes, and the apertures in both hard and soft parts are closed; the limb is not only sound, but is as useful as before."

Case No. 1—In the winter of 1874, I was consulted by a young man from the village of Stanton, who came to my office accompanied by Drs. Ranney and Wilkinson of that place. He was in excellent general health, and in the active discharge of his duties, that of a bookkeeper and general business manager for a prosperous firm in that village. For fifteen years, he had had an open sore upon the right thigh just below the great trochanter. Through this opening, by the use of the probe dead

bone could be distinctly felt. An operation for its removal was advised and readily consented to. The patient was placed under the influence of chloroform, in the presence of Drs. Martin, Sheldon and Morgan of this city, and of the gentlemen accompanying him. I proceeded to make the operation. An incision about four inches in length upon the external aspect of the femur, commencing just below the trochanter, was made down upon the bone, when the exfoliation was found and removed. It proved to be about four inches in length, three-fourths of an inch in width and one-eighth in thickness. Immediately upon the completion of the operation the patient went upon the street, smoked a cigar, took supper with his friends and returned to Stanton that night.

The operation was made on Tuesday, and the next Sunday and the following one, the young man came to Greenville ostensibly to see me, but I have always suspected that a young lady in this vicinity was the real object of his subsequent visits. At all events he made a rapid and perfect recovery.

This case is chiefly interesting as an example of simple exfoliation, and of the tolerance with which the system will sometimes endure the presence of so large a foreign substance. It also, well illustrates the rapidity of recovery in such case, necessitating as it did, so large and deep an opening through the soft parts. The young man was absent from business only one day, the day upon which the operation was made.

Case No. 2—Is that of a young lady, some sixteen years of age, who about two years previous to consulting me, was taken with what was called at the time by the attending physician, erysipelas of the left leg. Pain, swelling, suppuration and discharge followed, until the girl was reduced to a mere skeleton, and confined to her bed for two years. At the time she consulted me, the leg and foot were much swollen and indurated. Some four or five openings through the soft parts along the course of the tibia were found; through any one of which dead bone could be distinctly felt. An operation was advised, and the patient being under the influence of chloroform, an incision was made along the upper half of the tibia, down upon the new

bone, through which were found three small openings, communicating with the cavity containing the old dead shaft. These openings were made to unite by means of the chisel and mallet, thus forming one large opening about three inches in length in the upper portion of the new bony formation. Through this opening, the entire old shaft was extracted. The wound was thoroughly cleansed and filled with lint, a light roller bandage was applied over the limb and the patient returned to her home, a distance of ten miles that night. This patient made a rapid recovery, and is now living a few miles from this city in the enjoyment of excellent health, and with no perceptible deformity. The interest in this case consists in the fact of the disease, death and removal of the entire shaft of the tibia, followed by rapid restoration to general health and the preservation of the limb in its full usefulness.

Case No. 3, is that of a young lad about twelve years of age, a resident of the village of Stanton, whom I was called to see on the 22d day of June last. The history of the case as I learned it at the time, and have since had it confirmed by a letter from his father, is, that about the first of January 1875, the boy received a slight injury on the inside of the right knee. At the time he made but little complaint and the accident was soon forgotten. But three days after the knee became swollen and very painful, "and soon afterwards fever set in and a physician was called who pronounced the case one of typhoid fever. The fever lasted until into the early part of February, and in the meantime the whole leg and foot continued swollen and painful. The foot, and the leg below the knee, were considerably oedematous and pitted under pressure. About this time an abscess formed on the side of the head, just above and in front of the ear. It was opened and healed kindly. At this time the right arm began to swell and became inflamed. The swelling and inflammation extended the whole length of the arm, but being most severe from the shoulder to the elbow. Suppuration finally took place just below the shoulder joint and the pus was discharged at the under side of the arm near the axilla. His father says, "it

was estimated that one pint of matter was discharged from this opening at this time."

A large abscess now made its appearance on the lower part of the back, which discharged freely and soon became an open ulcer, about three inches in diameter. About this time the hip became inflamed and swollen, and the physician in attendance thought the early formation of matter plainly indicated. This was the last of March. Early in April Dr. Ehle, of Sheridan, was called, and decided there was no pus about the hip, and none has ever formed there.

At the time I saw the boy, on the 22d of June, he was very feeble and much emaciated. The right arm was lying helpless at his side, with a large opening through the soft parts on the inner side near the axilla. The right hip joint was completely ankylosed and the soft parts around it much swollen and indurated. The right ankle joint was much swollen and inflamed; and a small abscess was present over the right clavicle. The boy was placed under the influence of chloroform, and the finger passed into the opening on the inner side of the arm, where dead bone was distinctly felt. I had been called to remove this, but the case was so unpromising, that I frankly confess I hesitated to make an operation, fully believing the case must end fatally, whether an operation was made or not. But urged by my young friends, Drs. McLean and Ehle, who assured me the hip was not so bad as I supposed, I reluctantly proceeded to operate for the removal of the dead bone in the arm. For this purpose an incision was made along the upper aspect of the humerus about three inches in length, which proving insufficient, was enlarged by dividing the deltoid across, so as to fully expose the bone at its upper extremity, where it was found separated at its epiphysis. The sequestrum proved to consist of about three and a half inches of the superior extremity of the humerus. Its lower two-thirds was firmly enclosed in the new bony substitute, from the upper end of which extended a long pointed formation, which was sawn across, when the sequestrum was easily extracted by means of the forceps. The wound was cleansed and filled with lint, and closed with adhesive strips, and

a light roller bandage applied over the whole arm, which was placed in an easy position at the patient's side, without splints of any kind. The subsequent treatment was left entirely to the judgment and discretion of the attending physicians, Drs. Ehle and McLean, to whose courage, good judgment and previous knowledge of the case, I am largely indebted for whatever of success has attended the operation. Since the operation, the boy has slowly, but steadily improved in general health; and is now able to walk about and to amuse himself in various ways.

His father, on the 30th day of December, ten days ago, in a letter to me, states his condition to be as follows: "An open sore, on the heel and one just above the ankle-joint of the right foot, from both of which small pieces of bone have escaped. The hip joint, somewhat swollen, stiff and immovable, but not much sore. The sore over the clavicle not yet closed; and small pieces of bone are occasionally escaping from it. The wound on the shoulder, the result of the operation, nearly closed. The arm is not very strong, yet he uses it in writing, painting and whittling, and helps himself with it to a considerable extent."

This case is of interest, as illustrating the amount of disease the system is sometimes able to bear up under, and of the readiness with which nature will often second the efforts of the surgeon, even in the most unpromising cases.

Trusting the remarks here made upon the general subject of necrosis, together with the cases cited in illustration, will have the effect of calling the attention of the profession to a branch of surgery, cases of which every practitioner must often be called upon to treat, I respectfully submit this paper for your consideration.

Correspondence.

HOMEOPATHY IN THE UNIVERSITY—VIEWS FROM AN ALUMNUS' STAND-POINT.

EDITOR PENINSULAR JOURNAL OF MEDICINE—The fallacies of the “statement of the relations of the Faculty of Medicine and Surgery in the University of Michigan to homceopathy,” addressed to the Profession *and the public*, have been so thoroughly exposed in the reviews of Prof. Sager and others, that little more need be said on that score to convince disinterested observers that the Faculty have suffered themselves to be drawn into grave and serious complications—even if they had no agency in bringing them about—and in which the character of our Alma Mater suffers correspondingly.

Leaving the further discussion of the historical data, and the share of responsibility of the Faculty, for this unfortunate condition, which every true Alumnus must feel, involves the respectability of his professional parentage, to those who are more competent to continue it, we wish to direct attention to some other features of the “statement” and its endorsements, and to some obvious ethical considerations growing out of the facts already established as they appear to an Alumnus who has only the good of the old Medical College and of the profession at heart, and as I believe they appear to a steadily increasing number, as the situation is better understood, not only of Alumni, but of other regular physicians of the State; some of whom have been quoted as negatively supporting the position of the Faculty because of voting to avoid discussion before they comprehended the matter, and who deprecate the action of the State Society, at which some of them assisted, believing now that the policy of suppression, adopted there at the solicitation of the Faculty and their friends, was a mistaken one, implying doubt of the devotion of the alumni and a lack of trust in; or an unwillingness to heed, the voice of the profession of the state, or else a fear that their position would not bear the scrutiny of open discussion. They

believe also that the Faculty could safely have trusted to the justice of the Society, and should rather have sought than shunned an expression of its opinion: that the influence of the Faculty in suppressing discussion shows that they might have secured such a modified endorsement of their position from the Society, provided, of course, they could relieve themselves from responsibility for the predicament, as would have justified them in retaining their places under protest, while the experiment was tried long enough for the profession at large to have learned the peculiarities of their position, and in the event of the organized expression of the profession being adverse to the arrangement, trusting that the Regents and the Legislature sooner than see the inevitable decline of the College from its previous high position, would relieve the faculty of such an anomalous position, and its friends from the dilemma of supporting them in what they could not approve or withholding support altogether. But as the Faculty chose to take the risks without obtaining a formal expression of opinion on the merits of the situation, it is not strange that they soon found themselves under the necessity of making a "statement" which lacks all the force of a voluntary submission of the question to the profession for counsel, but seems a lame and labored attempt to defend their course.

If it was difficult to support the Faculty before their statement was issued, the difficulty has been made insurmountable thereby.

(Indeed, it is but just to some members of the Faculty to say, that it is reported that they privately repudiate the statement seeing its inherent weakness, and assert that they never saw it until its appearance in the newspapers, and make no pretense of defending its most objectionable features. Still they must be held responsible for their share of it while it remains uncontradicted and signed "In behalf of the Faculty.")

Weak and inconsistent as it is, the statement must be considered as the best that could be made, and as a concession to the right of the profession to be heard in deciding a question of such moment to all. As such, we accept it, and desire to discuss it, not as a partisan, but from the stand point of professional good and with the hope of encouraging a more general expres-

sion of opinion particularly from the Alumni; believing that whether they agree or disagree with us, their opinions cannot fail to influence the Faculty and the profession. An advisory right at least being accorded the Alumni of all modern Colleges a principle recognized in the university.

We concede the right of the Legislature and the Regents to establish as many Colleges as the people desire and choose to pay for, providing the good of the whole public is regarded. We concede to them honesty of purpose in official action, though the action may prove to have been unwise and unjust; nor do we consider them amenable on questions of general legislation to opinions of medical men except as to citizens of the State; though the Regents, as special guardians of the University, must admit as they have ever done, the peculiar relations and interest of physicians to the Medical Department. And we cannot suppose them more indifferent to opinions of physicians in this regard than to the opinions of lawyers concerning the Law Department. It might profitably be remembered here that it was not till the success of the Medical College had been assured, through the labors of its earlier faculties and the support of regular physicians, that homœopathy and other sects discovered their rights in it. Yet even its museum, whose valuable collections, the work and contributions of regular medical men, is heralded in the homœopathic announcement, as among the attractions of the Homœopathic College. Also, that the Faculty were formerly in the habit of stating that the Medical Department with its share of the National grant and the support of the profession was nearly self-sustaining and had received but little direct aid from the State.

We should deprecate any course that would make martyrs of any sect, medical or other. We believe nothing will so quickly dissipate the pretensions of homœopathy as a thorough and practical comparison with rational medicine; it is the farce of a comparison in the present arrangement that constitutes one cause of complaint.

We have a right to expect however that legislation shall not be in the interest of a class, and if the State engage in experi-

menting in sectarian education, that it shall conduct the experiments with such care and fairness, that the results may be of value in determining the claim of such sect upon the public for recognition or aid. That every project shall be so independent as not to prejudice the result of any other, but stand or fall on its merits. We have a right to expect that medical men shall not be required to endorse, by any indirection what they do not teach or believe; that either the plan of graduating regular students, be so changed that only those members of the Faculty who are not obliged to assist in the education and graduation of Homœopathists shall *constitute the Medical Faculty*, or else that each College shall be made entirely distinct in reality as it is claimed to be in name.

The State may wisely prescribe the time of study, the forms, etc., to be complied with in obtaining a degree, but it is not the province of the State to define special studies as medicine, nor to require the professor to authorize the issue of degrees sanctioning not only what he does not teach, but what he believes erroneous and pernicious. The State appoints a State Geologist, it does not require him to perform his duties according to some exclusive system of Geology. The Regents appoint a Professor of Constitutional Law, but they do not define the kind of law he shall teach; the common and statute law and the courts, a power superior to legislators, determine that; neither can they require him to unite with a teacher of a kind of law he believes unconstitutional, to confer on a student a degree authorizing him to practice unconstitutional law. The legislature in this instance were careful not to usurp this prerogative of individual judgment. They had an undoubted right to make the appropriation for a Homœopathic College, restricting the expenditure to that purpose, and with the sole other condition fixing locality.

The Regents had the authority to determine details of the plan, and the Faculty had the right to accept with or without protest or decline; and as according to the statement of Regent Rynd, they "interposed no serious objection" to the plan when submitted to them—a statement entirely superfluous unless "objection would have influenced the Board in its action, and if

true, would indicate a joint responsibility for the plan, and apparently justify the Regents in trying the experiment. Though, as the Faculty claim that the situation was forced upon them, we leave this discrepancy to be reconciled by those most interested.

The chief object of this paper is to show that, waiving the question of responsibility, the arrangement cannot successfully or permanently endure. It will make a house divided against itself which cannot stand, and in which both the College and the profession of the State, whether we wish it or not, will suffer serious injury; while nothing is determined as to the value of homœopathy; its failure will be charged by its friends to crippled facilities for teaching, while its apparent successes will be attributed by its opponents to borrowed light from rational medicine, and as in no sense proving the claims of homœopathy.

But the Regents cannot be expected to change the plan without a reason, and the Faculty having accepted the situation and remained thus far without protest—unless against those who differ with them—have greatly weakened, if not forfeited their right to object on their own account, and if the profession and the Alumni of the State keep silent, they cannot object on account of others, and the profession at large may well think we are all demoralized together, and the public wisely conclude we have been making much ado about nothing in our objections to homœopathy in the University “for more than twenty years.” Any expectation of the homœopaths offering objections on which the Regents could change the plan, notwithstanding their alleged “opposition to the arrangement” must be disappointed by the fact that the present plan is more favorable to them than former ones, in which they asked for even *one* or two chairs in the Faculty; but more directly by the action of the Homœopathic State Society, at its meeting in this city in November last, and more recently by the Michigan Homœopathic Institute, at its session in Lansing, Jan. 11th.

Apparently then, objections to be valid must come from those not committed to the project yet having a right to object. In-

fluenced by a desire to help rather than hinder, we write with the hope of inducing the Faculty and the Regents to reconsider their action, to find some common ground whereon the Alumni with the profession of the State can co-operate with them in an earnest effort to relieve us all of this misfortune, that will commend itself to the profession of the country, and if it cannot disarm, will at least suspend criticism while the trial is made. To this end, it is essential that the Faculty should understand the estimate placed on their position and on their statement by the profession of the State and as we believe from direct information from a considerable number of Alumni and others, the views we hold are shared by a much larger number of the Alumni of this and other Colleges whose opinions on the subject the Faculty cannot be indifferent to, we offer some of them more in detail. (We wish here to say, in justice to opinions, giving a qualified approval to the plan, expressed to several friends, with some of whom we talked on this subject before the plan of the Regents was printed, and with the understanding that the legislative act left the Regents no choice, and that the details of the plan were to be so arranged as to avoid any compromise of professional honor, and particularly that the Faculty were to be in no way responsible for the graduation of homœopathic students, that in the light of a more thorough understanding, the conditions on which such opinions were based prove to have been quite the reverse. Believing that others have likewise given premature expressions of approval, which they do not now endorse, and the desire to not appear inconsistent to any, must be our excuse for this personal explanation. We feel bound to add, however, that nothing contributed so effectually to any change of opinion as the Faculty's statement of their own case.)

We have no wish to embarrass the Faculty by captious criticism, however inviting the temptation offered in the statement. We had hoped that before this, they would have given the profession and the Alumni some encouragement to hope that "the position they occupy and propose to maintain," was at best but a temporary and contingent one, and dependent in some measure on the endorsement of the profession.

However unpleasant it be to differ with friends—and it seems more than usually so to the writer in this instance, not only because of personal and professional kindness received from members of the Faculty, but also because of the implied opinion in an editorial in the interest of the Faculty in a late No. of the JOURNAL, that the acceptance of kindness restrains the right of individual judgment on a public question—yet duty to conviction and to the profession transcends personal considerations. And if the opinions of the Alumni are worth anything in the case, they should be given without any morbid sensibility—not as students to teachers—but respectfully as members of the profession to other members of the profession. And on the essential points of this question every regular physician is competent to form a correct opinion. Indeed, the mere teacher of medical students can never have the opportunity that the average practitioner daily has to understand the “sovereign and immitigable contempt” with which the profession in common with Prof. Gross regard the organization of homœopathy.

Conceding the Faculty purity of motive and honesty of purpose in their attempt to reconcile irreconcilable conditions, the wisdom of their intentions must still be judged by results. And if they are not yet convinced of the untenable features of their position and their own statement of it, the opinions of the medical press from New England to California ought to occasion doubt of their right to “expect ultimately to be sustained by all judicious members of the profession,” etc., as it is not to be presumed that editors of journals discussing the subject with so much candor, intelligence and sincerity, are prejudiced, ignorant or interested. We do not propose to follow the example of the Faculty in impugning motives of those with whom we may differ, and as the Alumni of the Medical College constitute a large proportion of the regular practitioners of the State, many of whom we believe differ with the Faculty, we protest in their behalf against the implication that their “interests or sympathies for rival institutions have influence upon their views,” as an imputation upon their intelligence and fidelity to their Alma Mater. We beg to assure the Faculty that it is the very devo-



tion to their Alma Mater, and their unwillingness to criticise their old teachers, trusting they would initiate some action looking to relief, that has kept many of the Alumni silent so long, and the more they "acquaint themselves with the facts" and "calmly consider all the bearings of the subject," the more they feel disinclined to sustain the Faculty in their present position. In this feeling which is more wide-spread than the Faculty profess to believe, they are not only conscious of maintaining the professional morals taught them at the University, but as they believe of rendering important service to their Alma Mater and to the profession.

The effort in the statement to show that the treatment by the double members of the faculty of the homœopathic class, is different from their treatment of the regular class, is so strained as to contain not only palpable errors but misrepresentations so glaring—particularly concerning the required instruction and certification which the homœopathic student receives from the regular faculty—responsibility for his graduation, and signing diplomas—as to appear unworthy the character of men professing to teach science, to say nothing of truth, and until corrected must necessarily impugn the value of any statement the faculty may make.

How are the faculty to escape responsibility for the graduation of homœopathic students, when they knowingly contribute that which is an essential requirement to the student before he can obtain his homœopathic degree? Is not something beside merely passing examinations required to authorize the issue of a degree? Have not all medical colleges, including the University, heretofore required as evidence of the *intent* of the candidate, a certificate of previous study from a regular physician? Yet the homœopathic student so declares himself by his required matriculation, and presumably could have had only homœopathic preceptors. Knowing this, the faculty unite with two appointed homœopathic professors to give him the required aid to obtain a degree authorizing him to practice a system of medicine they don't believe.

Is the artist who engraves the plate which he knows is to be

used in counterfeiting the currency of his country, less a *particeps criminis* because he does not print and sign the bills or circulate them, or won't accept them himself for money after they are issued? Is it any palliation of the offense that his part of the work is skillfully and well done, in fact just as he would do it for an honest patron? And is not a counterfeit dangerous just in proportion to the perfection of the imitation of the genuine? Have not the faculty what in law is called guilty knowledge of the use to be made of their certificates to homœopathic students?

An Alma Mater is only such in name when it ceases to be a nourishing fostering mother. We shall ever cherish grateful memories of the character and services of the faithful teachers who constituted our faculty, which we could not do if we did not think they were right then instead of now; but we should ill deserve the care of a fostering mother and poorly express our gratitude, if we allow our affection to blind our judgment. We are sorry for the faculty. It is a shame that men occupying such positions should be subject to such uncertainties as the caprices of legislation; but is it not their duty to teach ethics as well as physic, and by example as well as by precept. Those who "bear the brunt" of battle must accept its dangers.

Are the faculty entitled to special credit for simply doing their duty? What if the physicians of the State who may have thought that they too were rendering effective service to rational medicine in discouraging quackery of every form and helping the faculty in carrying out their teachings, should say for so many years we have opposed the pretensions of homœopathy, exposed its absurdities, made sacrifices, etc., in short endeavored to practice the medicine and morals they had been taught, but following the conspicuous example of the faculty, should accept the situation thus "forced upon them," extend and supplement the plan of teaching homœopathy, meet and consult with their new half-brothers whom the faculty are aiding to send out, help them cure their patients, but exact no consideration of credit to rational medicine in return, leaving homœopathy to reap the reward and grow strong in the partnership; would not this be a "legitimate outcome" of the faculty's frailty?

Would it not seem consistent even to the laity whose opinions on professional topics seem to be courted now-a-days, and naturally confirm their notions that "there isn't much difference between them," and "the University is a State institution and the people have a right to decide it anyway," and that medicine is a "pathy," and physicians are "Allopathists?"

Indeed we begin to see indications already of such practical inferences, from the plan drawn by those physicians on whom ethical obligations rest lightly, justifying their course by reference to the faculty, thus increasing the difficulties of those who believe in and try to maintain a rational medicine, and who do not see why we should do evil expecting good will come.

To such the course of the faculty seems incomprehensible, unless it implies an immediate test of the principle of *similia similibus curantur* by its application to the case in question.

The effort of the faculty to justify their action by the alleged precedent of the State Society favoring the establishment of a mixed licensing board of examiners is not a happy one. The plan has never met the approval of the profession of the State, though it had much to recommend it to favor, as we understand it, over the plan of the faculty, in the fact that its licentiates were amenable to authority under penalty for violation of the license, that it contemplated better protection against quackery of all kinds, to the public as well as the profession, in controlling and regulating the quacks on hand—not engaging in the business of making more—to diminish the supply by lessening the inducements for home production or importation from without the State of either traveling or resident quacks; in short to make quackery unprofitable and unpopular by making the ordeal to its practice so severe that ignorance and pretension would be discouraged and a higher standard of *all the practitioners of the State* secured. But the faculty, after conceding that they opposed the measure, seek to strengthen their position now by the conduct of others, that they disapproved them. Which way will they have it? Were they right then or are they now? And it seems to us they go farther, and help make one form of quackery popular—thus giving comfort to all—by going down to its

level and helping to lift it up, not as a missionary measure in which reform of the benighted or any recognition of rational medicine is secured. On the contrary quackery is strengthened and the profession correspondingly discouraged and corrupted.

But the faculty intimate that there is to be a "hand to hand contest" in which the present arrangement will afford better facilities for the exposure of homœopathy. This idea has been so successfully placed before the public that not only medical journals appear to have been misled, but the opinions of medical men quoted in the faculty statements and elsewhere, clearly show them to have been based upon such a belief, and even intelligent laymen who have no interest in the question beyond seeing fair play, as they say, think there is to be a comparison of views and that they can now see what there is in homœopathy. Will the faculty be more explicit and tell us how this contest is to be conducted, when it is to begin, and who is to decide the result? Is it by comparison of practice clinically? Where is the homœopathic hospital? Where are the patients for either one? Let them be supplied, and who furnishes the comparison in homœopathic surgery, gynæcology, and diseases of children? Is it to keep the regular students from turning out homœopaths, as it is claimed some have always done? If so that might be better accomplished by letting them hear lectures on homœopathic practice! Is it to proselyte the few poor homœopathic students? But that is prohibited and guarded against by permitting them to hear no lectures on regular practice to compare with their dilutions; while in the lectures common to both classes, it is boasted in the communication from the "students," in the December No. of the JOURNAL: "No special accommodation is made for them in words or deeds." The "accommodation" being in the method of graduating them.

The faculty cannot be in earnest to intimate that teaching homœopathic students the "fundamental (?) branches" of surgery, etc., is a comparison of homœopathy, like the action of the "Commissioners of Charities and Corrections" in New York, in establishing a homœopathic hospital.

Yet clinical comparison is the only kind that can determine

results satisfactory to the profession or public, and must be a necessary "outcome" of the plan. If the Regents will establish a homœopathic hospital, secure true homœopathic treatment to its patients, which shall be registered and open as in government hospitals, then we may be able to judge whether their patients recover in conformity with the homœopathic "law of cure" so called, or as most physicians think by rational medication, falsely called homœopathy.

None can be more interested than physicians in having homœopathy fairly tested, and if there is anything to be learned from it, rational medicine can but desire to know it. The only inquiry the physician can afford to make of the contribution to medical knowledge is as to its truth and value; it is not material from whom or whence it comes.

But it is evident that in the present arrangement there is neither contest nor comparison, and in the nature of things there cannot be, and apparently the Regents designed there should not be.

The faculty and their supporters say that it is in the interest of humanity to have better homœopathic doctors. This is undeniable, (but why not include eclectic, clairvoyant, et. al.) But is it the mission of the regular profession to help educate them in this way? Is humanity to be benefited by directing the energies of three-fourths of a regular faculty to try to teach a dozen or two declared homœopathic students some science, knowing it is to be perverted to support what their teachers believe is quackery; and in the attempt, to draw down rational medicine and make it responsible by this quasi recognition; lower professional *esprit de corps* and weaken faith in any system of medicine? Would not this be a "penny wise and pound foolish" way to benefit humanity? Do we not also need better regular doctors? And has not the profession within itself all the facilities and material required, if it will utilize them, to supply the need, without dividing and frittering away its efforts on material which it condemns to begin with, and ends by saying of the result of its efforts, "such a man cannot be associated with on either honorable or moral grounds."

Can the profession in any way benefit humanity and itself so much as by making itself so incomparably superior to quackery, that the wayfaring man though a fool need not err in distinguishing between them? Do not the faculty "flee when no man pursueth" in their gratuitous exposition of homœopathy and of their continued disbelief in it? Yet do they not in so doing also write their own condemnation for inflicting on the public more of the same evil? Such a disclaimer ought to have been superfluous to the profession, while the public appreciation of it is shown by the newspaper in which the statement first appeared, editorially saying, "it will only rate as 'vacant twaddle' when uttered for general edification." Beside this we fear that our temperate strictures will seem too mild. We do not think the faculty's sin is one of ignorance, nor is the orthodoxy of their faith questioned, but it would be charitable to suppose that the apparent aberration of professional morals could be accounted for by a freak of "emotional monomania."

Nor can we think the faculty justified in saying the only alternative to their course was resignation, as we have already shown and as many believe, a medium course was open to them, though the letter of my friend, Dr. Rynd, in the December No. of the JOURNAL, (the part of which written from the professional stand point I had hoped to notice, but for the unintended length of this paper), in defence of the Regents and the faculty, implies that an "unobjectionable plan of organization" might have been adopted had sufficiently "serious objection" been "interposed" by the faculty when the present plan was submitted to them. If this be so a protest against so "objectionable" a plan, could not have been denied to the faculty. Such an anchor to windward now, we think, would render unnecessary any question of giving "up the ship."

We have before mentioned that some of the opinions quoted in defence of the Faculty indicate a misapprehension of the facts. Notably is this the case in the part of the letter published of Dr. Sims, which the Faculty apparently regard as a strong endorsement of their position.

He says, "they [the Regents] have simply placed them [the

homœopathic professors] in the same relation to you as they would other lecturers on special branches. Your autonomy is not disturbed. You are exactly where you were before these appointments were made." Are there any other "lecturers on special branches" in the university, whose teaching the Faculty denounce as "dreamy absurdities" yet help to disseminate? If the Faculty would not voluntarily have made this arrangement, if a situation so obnoxious is forced upon them and they cannot relieve themselves of it, then is not their right of self government "disturbed?" If the last sentence quoted is correct, then what "complications were effected," what is there to explain, and what occasion for a statement better than made in the special announcement in 1868? viz: "the Faculty are enabled to assure the profession that the *Medical Department of the University of Michigan is entirely free from the remotest connection with homœopathy.*" Can the Faculty repeat this assurance now? If they have no responsibility for the existence of this plan, why not put the onus of the whole matter where it belongs? What is the necessity for concealment? If the Regents enact that diplomas be signed only by the President and Secretary, why not say that the Faculty can only sign them in violation of the act? Why not admit the required instruction to homœopathic students, and the required responsibility for their graduation, and if this is not acceptable to the profession or to students, let the Regents see the consequences of their own act?

Why, alas! should the Faculty recognize the right of the Regents in determining their duties, to trench upon the rights of conscience?

Is there not obligation resting upon teachers as well as practitioners, to maintain inviolate the principles of professional morals, through which, more than through colleges, the profession lives and speaks. The Faculty recognize a "higher law" than Regents or Legislators in declining to accept as a physician or meet in consultation, the homœopathic graduate after contributing three-fourths of his professional education. Why then, authorize his going out to treat patients without their counsel? It will be an interesting reflection to the possible few

unfortunate members of the regular class whom the Faculty may reject, that homœopathic graduates—(of whose knowledge of therapeutics and theory and practice, the Faculty can know nothing beyond the fact that they have been taught, and are going out by their essential aid and authority, declaredly to practice a dogma so absurd as to be “unworthy of professional association”)—are yet preferred before themselves.

Ignorance is bad ; is imposture more worthy of encouragement ?

Colleges and schools deserve our allegiance only as they are true to our great profession—the mother of colleges as well as of physicians.

The whole is greater than any of its parts, is no more true in mathematics, than it is of the medical profession, and no part can be very great except as an integer of the whole.

The Medical College of the University, as an integral part of our profession, receives the sympathy and support of its alumni and the profession. Let it become antagonistic to the highest interests of the profession, and though the State may maintain a college, it does not need a prophet to foresee its history, or the relation its alumni must sustain to it. That such a calamity may be averted none will more earnestly desire than they.

It is never too late to mend.

If the Faculty desire to be in accord with the profession, to deserve and retain the confidence of the alumni, let them reconstruct their platform, relieve themselves from any share of responsibility for the establishment of the homœopathic college, or for the graduation of its students, revise their statement, correct its errors, make the statement in Dr. Sims' letter that “ You are exactly where you were before these appointments were made,” entirely true, as it would seem he must suppose it to be ; and we believe they may draw confidently on the alumni for a united, generous and hearty support of their alma mater ; and the writer, whose professional life has largely been spent in sight of the old college, whose professional and social friends are in its Faculty, whose best wishes, hopes, and interests are all with the college, will earnestly help them to honor the draft.

W. F. BREAKY.

ANN ARBOR, Jan. 21, 1876.

MR. EDITOR—The last number of the PENINSULAR JOURNAL contains a communication from Prof. D. Maclean, replying to one of mine in the December number on the “Radical Cure of Hydrocele.” The Professor’s admonition, “Read o’er this; and after, this;” has been carefully observed, and now, “by your gracious permission,” we will proceed to “breakfast” with appetite unimpaired, assured that we have abundance of meat to feed upon. I propose to adduce evidence from established authorities, showing the Professor’s assertion, that the “practitioner is able to assure the patient of speedy, safe, painless and permanent relief,” is untenable, and secondly, that the treatment he so strenuously advocates is many times unsuccessful, and in the event of its failure, resort has been made to other methods successfully.

“Sir A. Cooper still retains a preference for the seton for children, on account of its application being more easy in them than the employment of injection.”—*Lancet*, vol. 2, p. 85.

“Sometimes, when the injection is strong, a great deal of it has passed into the cellular membrane, and the constitution is irritable, the mischief produced ends in the patient’s death. Many such cases are on record, and two are noticed by Sir Astley Cooper.—*Lancet*, vol. 2, p. 89.

As Prof. Maclean refers to the published views of Professors Gross and Hamilton as confirming him “in the opinions for which he has been taken to task,” we offer a quotation from each of these gentlemen.

“The use of a seton for the radical cure of a hydrocele is supposed to have been recommended by Galen. It was practised by Pare, Masini, Pott, and by many other excellent surgeons at different periods, and is still preferred by some of our most experienced operators. Dr. Gross prefers it to all others on account of its ‘simplicity, freedom from danger, and never-failing certainty.’”—*Principles and Practice of Surgery*, Hamilton, p. 877.

“But for myself, I am obliged to go a great deal farther, and to say that the failures by iodine injections are quite equal to the successes. In the early part of my practice, and for many years, I made no other radical operation for hydrocele; and

most or all of my contemporaries in this country, under the influence of the great name of Velpeau, did the same. My experience, therefore, entitles me to speak in some measure authoritatively. * * * * * With the tincture of iodine, sloughing has never occurred under my observation, but suppuration has been an occasional result. In a considerable proportion of cases the first operation has proved an entire failure, rendering it necessary in some cases to repeat the operation *several times*; and of those remaining permanently under my observation, and supposed at first to have been cured, *not a few have returned to me, after the lapse of two or three years with the hydrocele as large as ever.* The conclusion to which this experience has gradually conducted me is that this operation, not wholly free from danger, is altogether too unreliable to merit any further trial, and I have for fifteen years abandoned it altogether."—*Principles and Practice of Surgery, Hamilton, pp. 875-76.*

From a most admirable authority, and one from which the Professor quotes, we extract the following testimony in our behalf:

"Useful as the iodine injection is, *it sometimes fails in producing a radical cure of hydrocele.*

"One circumstance connected with the injection of tincture of iodine into the tunica vaginalis deserves note. It is that, although in some cases it occasions but little pain, in other instances the suffering induced by it is of the *most severe and agonizing character*—more so than follows the introduction of any other of the ordinary stimulants into the tunica vaginalis.

"There can be no doubt that, as a first remedy, iodine injection is preferable to the seton, in the treatment of hydrocele; *but when the injection has failed, and this from no want of care on the part of the surgeon, or of attention to the after-treatment of the case,* but apparently from insufficient inflammatory action having been set up in the tunica vaginalis to restore the lost balance between secretion and absorption in this membrane, the seton will, I think, be found to be the most certain means of accomplishing our object."—*Erichsen's Science and Art of Surgery, vol. 2, pp. 827-28-29.*

In conclusion I do not wish to be understood as discarding entirely the iodine treatment for the radical cure of hydrocele; but I do have the assurance to claim that if it is resorted to at all, the "new-fangled" method of injecting with hypodermic syringe without tapping is superior in all respects to that advocated by Prof. Maclean.

My experience is not based upon a single case, and I am sustained by the testimony of many surgeons who have adopted the same treatment.

Z. H. EVANS.

MIDLAND, MICH., January 28, 1876.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

SALICYLIC ACID, COMPARED WITH OTHER ANTI-FERMENTS.

It is less than a year since the word came that this article possessed manifold anti-ferment powers, when used in quantities, scarcely at all influencing the human system, and, with all due allowance for the over estimation of new things, there is little doubt but it is destined to take and hold a place among the more important agents of the pharmacopœia. From indisputable testimony, it arrests a greater number of fermentive changes than carbolic acid or sulphurous acid, and is quite as potent as either in arresting the less determinate changes of putrefaction and decay. It is well known that certain of that class of fermentations due to unorganized ferments—including the change of starch into sugar by diastase or ptyalin, that of myronic acid into mustard oil on moistening broken mustard seeds, and the generation of bitter almond oil and prussic acid from amygdalin—are not prevented by carbolic acid or creosote (¹). On the

(¹) LEMAIRE; confirmed by CROOKES and ANGUS SMITH, *Report on Cattle Plague*, 1866. PLUGGE: *Archiv. f. Physiologie*, v. 538; *Amer. Chemist*, 1872, p. 183; *Yours. Chem. Soc.*, 1872, p. 904.

other hand, these agents appear to check those changes due to organized ferments, not only the fermentations proper (as the alcoholic, lactic and butyric) but also the indeterminate changes of putrefaction and decay, which, Pasteur has shown, are allied to the vital fermentations in being invariably accompanied by living growths.

It has been found that salicylic acid does the work of carbolic acid upon the *organized ferments*, and, in many cases, with a greater efficiency. Plugge found that 4 per cent. of phenol (cryst. carbolic acid) were required for the total arrest of alcoholic fermentation, though doubtless a much smaller proportion may prevent the beginning of fermentation, germs being absent from the liquid. Prof. Neubauer, of Wiesbaden, found that $\frac{1}{2}$ per cent. of salicylic acid in fresh grape juice, prevented fermentation, 2 per cent. being required to prevent growth of fungi, $\frac{2}{10}$ per cent. being required when the juice was planted with 0.001 per cent. of yeast cells (in 0.2 per cent. of fluid yeast), and 5 per cent. being required when the juice was planted with 0.01 per cent. of yeast cells (in 2 per cent. of fluid yeast).²

Prof. Kolbe, of Leipzig, who has originated the manufacture of salicylic acid from cheap materials, has found it efficient in preventing or arresting the alcoholic, lactic, amygdalous and synapous fermentations, the latter two of which are due to *unorganized ferments*. To be more explicit, he ascertained that grape juice was preserved from fermentation by one-tenth per cent. of salicylic acid, that four-hundredths per cent. delayed the souring of milk 36 hours later than it otherwise occurred, and that ground black mustard when moistened with very dilute water solution of the acid developed no volatile oil. Also, the very same agent added to urine prevented the generation of ammonia for three days. The investigations of Müller confirm the statement that the action of unorganized ferments is prevented or arrested much more efficiently by salicylic acid than by carbolic acid.³

(2) *J. pr. Chemie* [2], xi, 2; *Jour. Chem. Soc.*, 1875, 459; *Accr. Chem.*, 1875, Aug., p. 48.

(3) *J. pr. Chem.* [2], xi, 1; *Jour. Chem. Soc.*, 1875, 459; *Amer. Chem.*, 1875, Aug., p. 48.

The action of emulsin in the amygdalous fermentation being paralyzed by 0.2 per cent. of salicylic acid, while requiring 10 per cent. of carbolic acid, and the action of ptyalin in saliva on starch prevented by one per cent. of salicylic, and by not less than 10 per cent. of carbolic acid.

Now in prevention of those changes classed as *putrefaction* (when offensive products appear), and *decay* (when the products are not very offensive)—most of which are accompanied by characteristic living growths—there is good testimony for salicylic acid. At the last session of the British Pharmaceutical Conference, Mr. Benger exhibited the results of a series of experiments with those galenical preparations which “must be made after they are ordered,” viz: infusions and decoctions, also, with lemon juice and flour-paste. He had made additions $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, and one grain or salicylic acid to the fluid ounce, with some 22 different infusions, decoctions and mixtures of the B. P. They had stood in uncorked and loosely-covered bottles for from two to four months, at temperature of 65° to 75° F., being presented at 24th August. Those which had spoiled, from lack of sufficient quantity of the antiseptic, had been rejected. Of the 22 preparations found fresh and good, 12 had required $\frac{1}{2}$ grain, six had required $\frac{1}{4}$ grain, and four had required one grain of the antiseptic to the fluid ounce for preservation. Infusions of buchu, orange peel, and gentian co., had kept with the smallest quantity; and paste, lemon juice and acacia mixture had required the largest quantity of the antiseptic. Juices of taraxacum, conium, and hyoscyamus, had failed in a few weeks, with one grain to the ounce; but these juices, with half of the alcohol directed by the B. P., and having instead one grain salicylic acid to the ounce, had kept well.

There was a free discussion of the subject in the Conference⁴ with a general acceptance of Mr. Benger's conclusions, but with some dissenting experience. Also it was mentioned that the purple precipitate of salicylic acid with tincture of chloride of iron was a frequent inconvenience. The *use of*

benzoic acid—recommended by Mr. Rother, and by Prof. Salkowski⁵—was discussed, and Mr. Benger had tried some infusions with it, and had found these with $\frac{1}{4}$, $\frac{1}{2}$, and one grain of the benzoic acid to the fluid ounce, had kept one month; those with $\frac{1}{8}$ grain having spoiled. The use of salicylic acid in the jar for *preservation of leeches* had been tried by several pharmacists and both success and failure were reported.

The use of *boracic acid* as an antiferment was also referred to during the discussion on Mr. Benger's paper. It has been used extensively on the continent for preservation of milk and of meat, also forming the principal constituent of a proprietary article called "aseptin," sold for that purpose in Germany, and several of the British public analysts present stated that milkmen use it to preserve milk, in which the analysts had found it.

Mr. Benger also had investigated the effect of salicylic acid upon *albumenoid digestion*. Hard boiled white of egg, 100 grains; Bullock and Reynold's pepsine, two grains; hydrochloric acid, five minims, and water, one fl. oz. were mixed, and similar mixtures were treated with $\frac{1}{4}$, $\frac{1}{2}$, and one grain of salicylic acid, and all were set aside at 98° F., for six hours. In the mixture without the antiferment, all the albumen had disappeared; in that with $\frac{1}{4}$ gr., one grain of albumen remained undissolved; in that with $\frac{1}{2}$ gr., two grains of albumen were left, and in that with one grain salicylic acid, only five grains of albumen remained undigested. Parallel experiments with *benzoic acid* indicated that it retards the action of pepsin somewhat more than does salicylic acid. All reports agree that 15 or 20 grains of salicylic acid per day may be taken without notable disturbance of alteration of functions.

In prevention of *putrefactive changes*, or preservation of albumenoid bodies, salicylic acid has been reported efficient. Kolbe found that it preserved eggs, and obtained some results with meat which await fuller investigation.

(5) R. ROTHER: *this Journal*, 1875, June, p. 257.

E. SALKOWSKI: *Pharm. Zeitung*, June 30, 1875; *Klin. Wochenschrift*, No. 22 1875; *this Journal*, Oct., 1875, p. 489.

In *surgical antiseptic treatment*, Wagner⁶ found salicylic acid superior to phenol for both fresh wounds and old sores, and efficient in eczema, diphtheria, and fermentive disturbances of the alimentary canal. It is stated that Prof. C. Thiersch has shown "salicylic acid fully equal to carbolic acid as a preventative of putrefaction in surgical treatment ; it supasses the latter on account of its being odorless and less irritating."

Salicylic and carbolic acids are alike in this, they *cannot serve directly as deodorizers*. They do not destroy the foetid products of decomposition, as bromine, chlorinated compounds, nitric acid, and permanganate do ; not being, like these, "oxidizing agents." On the other hand, these antifermers or preservative agents prevent the decomposition which is the source of foul products—as the simple oxidizing agents do not.

In *composition*, salicylic acid is immediately allied to oil of spiraea and salicni, and nearly allied to benzoic and cinnamic acid, and to phenol (cryst. carbolic acid) from which it is manufactured. It is a somewhat simple derivative of that hydrocarbon nucleus, benzene of coal tar, from which are derived the innumerable compounds of the "aromatic group." This group is eminent for antiseptics ; it embraces the cymene and terpene volatile oils, with little doubt most of the resins, finds fullest representation in the balsams, and includes the modifications of tannin. Oxybenzoic acid is isomeric with salicylic acid, but is not antiseptic. The two similar antiseptics, salicylic and benzoic acids, both natural vegetable products, are manufactured from coal tar—a portion of the benzoic acid of commerce being produced from the hydrocarbon, naphthalin.

It is to be noted that Prof. Kolbe has proven that the *salts of salicylic acid have little or no antiseptic power*, whether with metallic or organic bases and including, of course, the "oil of wintergreen," methol salicylate. Dr. Endemann⁷ has pertinently remarked that this fact excludes the use of salicylic acid from alkaline solutions, if they cannot be acidified. Experiments on

6 *J. pr. Chemie* [2], xi, 57; *Four. Chem. Soc.*, 1875, 776.

(7) *Am. Chem.*, 1875, Aug.—in a valuable article before quoted.

salivary and pancreatic actions, and Müller's experiment upon the glycogen of the recent liver, may be thwarted from this cause. Also, the fact may be borne in mind, in any theoretical considerations as to the operation of salicylic acid through the blood. Farther, in a solution containing salts, though having an acid reaction, a portion of the salicylic acid added would unite with the basis of the salts (no precipitate being formed), and this would probably deprive the antiferment of some portion of its power. Putrefactive changes usually induce an alkaline reaction.

SALICYLIC ACID IN FORMS FOR ADMINISTRATION.

This substance is sparingly soluble in cold water (requiring about 1000 parts), much more soluble in hot water and freely soluble in alcohol. It melts at 257° to 302° F., and sublimes at about 400° F. The alkali-metal salicylates are soluble in water. As a dibasic acid, it forms acid salts which are more stable than the normal. It displaces carbonic acid from carbonates. With ferric salts, salicylic acid gives a deep violet color (benzoates, a flesh color); with concentrated sulphuric acid and glucose, a blood-red color on warming (benzoic the same); warmed with methylic alcohol and sulphuric acid, the odor of wintergreen oil (characteristic).

In May, salicylic acid stood in the prices current at 75c to \$1.00 per oz.; in January, at 50 to 60 cts. per oz. Prof. Kolbe is said to hold patent for its manufacture in this country.

The following compilation of formulæ for administration of salicylic acid is abstracted by the *Pharmaceutical Journal* (London), Nov. 13, p. 382, from a compilation by M. Maury, of Lyons, published in *Reperoire de Pharmacie*, Oct. 25:

EXTERNAL USE.—Dr. Wagner recommends that a thin layer of finely powdered salicylic acid should be spread upon calico, and applied by means of a bandage to wounds.

POMADE.—Dr. Wagner gives the following formula:

Salicylic Acid.....	15 parts.
Alcohol.....	30 "
Lard.....	150 "

It is important to use the alcohol as a solvent; the direct mixture of the acid with the lard does not give the same good effects.

DENTIFRICES.—M. Paulcke, a pharmacien at Leipzig, prepares as a dentifrice a powder in which salicylic acid is incorporated; also an "*elixir dentifrice*," from a solution of the acid aromatized with oil of wintergreen.

FOOT POWDER.—It is stated that salicylic acid removes the odor of sweat from feet, without preventing the sweating, its action being to prevent the formation of butyric, valerianic and other acids of the same family, which injure the feet. M. Paulcke therefore prepared with salicylic acid, soap, talc, and starch, a powder for the feet, which, whilst rendering them firm, is said to induce an agreeable softness and to remove all unpleasant smell.

MIXTURE.—The following formula is attributed to Professor Wunderlich:

Salicylic Acid.....	1 gram.
Oil of Sweet Almonds	20 "
Gum Arabic	10 "
Syrup of Almonds.....	25 "
Orange Flower Water.....	45 "

A teaspoonful to be taken every hour when children are sufficiently old to use a gargle. Dr. Fonheim says it may be so administered every hour.

SOLUTION IN GLYCERIN AND WATER.—M. Muller, a pharmacist at Breslau, gives the following:

Salicylic Acid.....	1 gram.
Glycerin.....	20 "
Distilled Water.....	80 "

First treat the acid with the glycerin, and then add the water.

In Switzerland, salicylic acid has been used in typhoid and paludian fevers, etc. It has been noticed that it has a very remarkable cumulative action; for after having obtained the desired remission by a first dose of 4 to 8 grams, it has been found that a dose of one-half or one-fourth that quantity on the following days is sufficient to keep the temperature within good limits. Dr. De Cerenville recommends that these doses should

be administered in water, flavored with liquorice juice.

The following formulæ are due to M. Maury :

ANTISEPTIC MOUTH PASTE.

Rectified Salicylic Acid.....	2 grams.
Honey.....	34 "

COMPOUND POWDER FOR EXTEMPORANEOUS ANTISEPTIC MOUTH PASTE.

Rectified Salicylic Acid.....	2 grams.
Powdered Sugar, or some other inert powder.....	20 "

Mix. To be applied to the sore parts of the mouth by means of a brush previously moistened with water.

LOZENGES.—Salicylic acid, with sufficient gum and sugar for each lozenge to contain 25 milligrams of the acid.

SALICYLIC SYRUP.—Pure salicylic acid, with sufficient syrup of orange-flowers for 20 grams to contain five centigrams of the acid.

MIXTURE.

Pure Salicylic Acid.....	1.50 grams.
Powdered Gum Arabic.....	10.00 "
Sugar.....	10.00 "
Orange Flower Water.....	20.00 "
Distilled Water.....	10.000 "

F. s. a.—Shake the bottle before each dose. A teaspoonful every two hours for children.

SALICYLIC WINE.

Pure Salicylic Acid.....	2 grams.
Muscat Wine.....	100 "

WINE OF CINCHONA AND SALICYLATE OF QUININE.

Calisaya Bark	30 grams.
Salicylate of Quinine.....	1 "
Maderia Wine.....	1000 "

INJECTION.—A solution of one part of salicylic acid in 300 parts of water has been used as an injection in fluor albus.

Proceedings of Societies.

WAYNE COUNTY MEDICAL SOCIETY.

DETROIT, January 6, 1876.

The society convened this evening at Dr. Sinclair's rooms, Fort street west.

Dr. Leonard presented two new bandages for the consideration of the society. One was the figure of 8 spiral of the extremities in which a reverse is made upon each second turn of an ordinary roller; a variety of this bandage is the figure of 8 bandages of the extremities. In this no reverses were used from the toes to the hip. The advantage of these lies in the fact of the dressing being of double thickness. The other bandage exhibited was the caputina or rosette, stump dressing.

Dr. Heaton reported the prevalence of measles. One case in his practice had proven fatal; in this case the eruption was of the hæmorrhagic variety. He reported also an interesting case in which there was an apparent blending of scarlatina and measles, and raised the question: can two infectious diseases run their courses together in the same individual? The question elicited some animated discussion.

Dr. Mulheron, in the affirmative, had come to the meeting to report a case which had just occurred in his practice, in which the concurrence in the same patient of the two diseases, scarlatina and measles, was unmistakeable. The child in which they occurred had first the characteristic eruption of measles, together with a peculiar redness of the skin between the patches, which in ordinary cases is unaffected. The tonsils were very much congested and swollen. After the subsidence of the measles the scarlatina eruption was distinct. The sequela confirmed the diagnosis of scarlatina. The desquamation was characteristic and kidney trouble followed.

Dr. Harlow related a case in which measles and scarlatina were combined. Believes that in such cases each poison modifies the other.

Dr. P. Stewart denied the possibility of the co-existence of two poisons in the same patient, and although distinguished writers reported such diseases as typho-malarial fever he had never seen them and doubted their occurrence.

Dr. Heaton believed that measles and scarlatina might occur conjointly, although he had never met with an unmistakeable case. The one mentioned by him came the nearest to such a case that he had ever seen.

Dr. Gustin doubted the possibility of the co-existence of the two affections. The eruption of measles may be so modified as to create a suspicion of scarlatina, and yet no characteristic symptom of the latter affection be present.

Dr. Mulheron reported a case of post-partum hæmorrhage. It was at the woman's fourth confinement, and as alarming flooding had occurred at each previous labor, he took especial precautions to ward off its occurrence in this instance. Two large doses of ergot had been administered at intervals of fifteen minutes, before the birth of the child, and ice was had in readiness. He also directed the nurse to exert firm pressure after the expulsion of the child. After cutting the cord he placed his hand on the uterus and found it large and soft. He immediately removed the placenta, which was followed by profuse flooding. Conjoined manipulation with the left hand in the uterus, and the right externally failed to set up contraction. The introduction of a piece of ice into the uterus and a dash of cold water externally finally succeeded.

Dr. Harlow's favorite remedy in these cases was capsicum, administered in $3j$ doses. In smaller doses it only does harm.

Dr. McKeown gives $3j$ doses of acetate of lead with good results in such cases. Had never seen bad effects to follow these doses.

Dr. Stewart also testified to the efficacy of $3j$ doses of acetate of lead. It acted within three minutes after its administration. The remedy in such doses was introduced by Dr. Workman of the Provincial Asylum, Ontario. Has seen capsicum given as a sternutatory in these cases with the effect of arresting the flow.

Dr. Mulheron related the experience of a physician who had in eighteen cases applied over the sacrum with success, a poultice made of the white of eggs coagulated with alum. The *modus operandi* of such treatment is very obscure, but its success is vouched for.

Dr. Heaton said that Prof. Penrose placed great reliance in a peeled lemon introduced into the uterus, and large doses of opium given internally. He, however, would not rely on such proceedings. Conjoined manipulation was his reliance in these cases and he had never seen it fail. He disapproved of the cold douche, from its chilling and wetting the patient and her bed.

Dr. Leonard spoke of the use of towels wrung out of ice water and slapped across the abdomen. The good effects of the douche were thus secured and the evil avoided. This, with conjoined manipulation, was the reliance at a maternity to which he had been connected.

C. HENRI LEONARD, M. D.,

Secretary.

W. H. ROUSE, M. D.,

Vice President.

WASHTENAW COUNTY MEDICAL SOCIETY.

The 39th regular meeting of the Society was held at Cook's Hotel, Ann Arbor, Dec. 28, 1875.

The President, Dr. Oakley, in the chair.

Present.—Drs. Batwell, Kinne, Owen, Sager, Palmer, W. B. Smith, Kapp, E. Hall, D. Hall, Frothingham, Rose, Rexford, Dunster, Ultes, Maclean, Georg, Peare, Stevens, of Detroit, Collor of Wayne and Breakey.

On motion, reporters for secular press were requested to restrict their reports to matters of general interest, and to submit them to the Secretary for approval, in justice to both the Medical press and to the Society, which has been annoyed by the garbled newspaper reports of its meetings.

Prof. Langley was introduced to the Society and elected an honorary member.

Dr. Sager read the first of a series of papers on *Asphyxia Neonatorum*. In this paper he confined himself to the consideration of the question whether respiration properly so called, exists in the foetus, and if so, whether the placenta was the organ through which this office was performed.

His data were derived from two sources; first, from the comparative physiology of the foetal stage of development of the viviparous fishes, amphibious reptiles, and implacental mammals; and second, from the character of the blood of the foetus, the structure of the placenta, and the capacity for absorption of the liquor sanguinis of the mother. He indicated the parity of anatomical and physiological condition of the human foetus during the earlier stages of development, with that of the implacental mammals, and designated the two stages as placental and implacental, and deduced conclusions from the difference in the mode of nutrition in the two stages.

The paper, which was rather introductory to the subject proper, was very interesting and the subject ably discussed.

Dr. Dunster was very glad to hear the paper, particularly because the conclusions on the subject of foetal respiration were not drawn alone from data obtained from adult life, and without comparative physiology as has heretofore been the case.

On motion of Dr. Palmer, the thanks of the society were tendered Dr. Sager for the paper, and he was requested to read the completion of the subject before the society, and furnish copy for publication with its proceedings.

Dr. Sager was not certain he could comply with the request of the society, as he had some thought—if his health permitted him to continue the subject—of reading the paper elsewhere.

Dr. Georg read a very interesting lengthy paper on “*Transfusion*,” being a *resume* of the recent literature on the subject. He read the first part of his paper only at this meeting, and his conclusions thus far are that the remedy is only applicable to cases of loss of blood, and that similar blood should always be used, dissimilar blood being injurious. He quoted numerous authorities and statistics to prove the poisonous effects of dissimilar blood.

Dr. Palmer said the conclusions arrived at in the paper should make us cautious of adopting the views of various reports of practitioners and societies—mentioning a medical society in Illinois, and the State Medical Society of Maine—and distrust the so-called results of the benefits of transfusion in consumption; and that the remedy must be restricted as hereto-fore to extreme losses of blood.

Dr. Sager moved the thanks of the society to Dr. Georg for his able paper, with the request that he complete it.

Dr. D. Hall gave the address required by his office of vice president, on the subject of "*Our Profession—Its Ethics.*" In which he treated of the necessity for the observance of the general ethics of the profession—of homœopathy in and out of the University, and other forms of quackery. Also enunciating the principal that a fee bill, whether approximate or fixed, imposes obligations to preserve its maximum as well as its minimum limits. The idea that the object and spirit of a fee-bill might be violated by exceeding its rates, seemed so novel to some members as to give rise to a spirited discussion on general and special fees, participated in by Drs. Frothingham, Palmer, Smith, Dunster, Hall, and others, which was closed for the more agreeable order of business of dinner.

The thanks of the society were voted Dr. Hall for his address.

Dr. Maclean reported a case of Syme's operation for disease of the ankle joint, exhibiting the amputated foot, showing pathological condition of tissues, with caries of os-calcis, etc.

[The case was reported in full in JOURNAL for January.]

Dr. Sager presented a photograph sent him by Dr. Samuel G. Ellis, of Lima, N. Y., of a worm with following history:

"This worm, $2\frac{1}{2}$ inches long, was vomited while alive, from the stomach of a child five years old after taking a dose of oil of terebinth. The child had heretofore been subject to feverish attacks which had been attributed to worms, and had been relieved by the use of common vermifuges. At this time the child had been indisposed for several days, had passed several of the common *ascaris lumbricoides*, but got no relief until this

worm was thrown off. The worm has bony mandibles, but no antennae discoverable."

Dr. Sager thought it a larva of the common moth, and that it might subsist and grow for a time in the human stomach.

Dr. Palmer asked if it could live in water, and if not, did not believe it could live any longer in the human stomach.

Dr. Sager explained that there was always air enough in the stomach for the respiration of such an animal; and that it could live and breath very similar to the larvæ of the gad fly or bots in the stomach of the horse; that it could breathe through one of its spiral air tubes, there being free anastomosis between its air vessels, while attached to the mucous membrane of the stomach.

Dr. Frothingham presented case of extirpation of left eye, and a pulsating vascular tumor of orbit, which had been thought to be a true aneurism. Previous treatment had been adopted—including ligation of left common carotid artery three years ago—checking the growth over two years. The case made a good recovery and will be more fully reported hereafter.

Dr. Palmer reported some cases of remittent fever with peculiarities new to him, apparently malarial, yet irregularly continued and not amenable to quinine. During the paroxysm of fever, the temperature would reach 104° or 105° ; some perspiration during and after paroxysm; the patients keeping up and about the house most of the time.

Dr. Stevens reported similar cases occurring in his practice in Detroit, and that he had found chinoidine successful in some cases where quinine had failed; and in some cases anti-periodics so-called, seemed to have but little influence over the course or duration of the fever.

Dr. Georg stated in reply to Dr. Palmer that he was accustomed to see malarial poison assume various forms of manifestation, even to manifest itself simultaneously with other specific fevers, as typhoid, etc., and that quinine was not regarded by the profession as the exclusive specific for malarial fever, he had seen it fail in many cases where it had been given in large doses for days, and even weeks. He had seen favorable results

follow the administration of eucalyptus globulus, 3j doses every two or three hours for adults, where quinine had signally failed to accomplish a cure, three or four doses being in most cases sufficient. He also referred to an article on malarial fever by Dr. Lorenser, of Vienna, published in Mich. Univ. Med. Journal, Vol. III. Dr. L. reported 118 cases in which quinine had been given unsuccessfully, 91 of which recovered under the use of eucalyptus; and in 27 no result followed. Dr. L. likewise reports cases in which eucalyptus was unsuccessful in which quinine accomplished a cure. Some cases were neither benefited by either of the remedies; in such cases he (Dr. G.) administered Fowler's solution often with favorable result.

Dr. Sager exhibited also some curiosities of human and comparative anatomy. First, the dried skeleton of a foetal calf, three months, showing two centers of ossification in bodies of vertebra, contrary to statement of most authors.

Second, a three months foetal human skeleton, showing striking resemblance in form in the distal phalanx of the fingers to the corresponding phalanx of the foot of the horse, interesting to Darwinists as showing the horse stage of foetal development.

Dr. Georg reported the following case of empyema. Last spring he had treated patient G. F. B., for pleurisy; right side. Towards the end of May some effusion was diagnosed, but patient declined all further treatment. Patient was seen again in November; the effusion had now assumed great proportions. Right lung completely compressed; liver lying completely below the ribs; the beat of apex of heart was seen nine inch below and three into the left side of left nipple. Patient was unable to lie in bed; had to support inspiratory muscles. On Nov. 28, in presence of Dr. Kapp he introduced trocar, and withdrew 5½ quarts of clear pus, and quite a quantity of pus was lost during the operation. Next morning the whole was found to weigh 11½ lbs. Immediately after the operation the respiratory murmur was heard in upper part of right lung. During the first few days the effusion seemed to gather again, but shortly afterwards it was lessened from day to day. The doctor will report the progress of this case at next meeting of the Society. [Prof. P. B. Rose examined the liquid and found it to be pure pus.]

Dr. Oakley also reported a case of empyema of which he read the following interesting account:

Was called Aug. 6, 1875, to see Dorr G——, a slender lad of 17. Found him sitting up in bed gasping for breath, emaciated to the last degree, and apparently near his end; pulse, 130. On examination found the left intercostal spaces bulging greatly—the left side measuring $2\frac{3}{4}$ inches more than the right—no respiratory murmur that could be detected, and the heart so pushed over to the right side that the apex beat in very nearly its corresponding position below the right nipple. He had been for some ten weeks previously, under the care of two “botanic” quacks—father and son—who had treated him, first for pneumonia, afterward for “swelled lung.” A history of the case from the friends showed conclusively that the original trouble had been a very severe attack of pleuritis, which, without proper treatment had led to the above results.

Diagnosis; empyema, and advised an operation as the only means of saving life, though with many misgivings as to the result. Operated the next day, the patient being moderately under the influence of chloroform; in the usual manner and place, between the 5th and 6th ribs. Used a small trocar and canula, to which I had carefully fitted the exhaust tube of a Davidson's gum elastic syringe, after the plan given in Flint's Practice,* by a connection made perfectly air-tight by grinding it well into the end of the canula. On withdrawing the trocar, the syringe previously filled with water, was attached to the canula and then slowly worked in the usual manner. The additional precaution was taken of pinching the elastic tube firmly between the bulb and the canula, before compressing the bulb, lest even the small bubble of air remaining in the connecting tube at the point of attachment, be forced into the pleural cavity through any imperfection of the valves.

With this apparatus, which seemed to answer the purpose of an aspirator perfectly, about $6\frac{1}{2}$ pounds of sero-purulent and

*Dr. Oakley stated to the Society that at the time of using this improvised aspirator he supposed it to be original application of the syringe to such purposes.

slightly fetid matter was readily evacuated. The patient seemed much relieved by the operation, though no respiratory murmur could be heard on the affected side, and the heart still remained in its abnormal position.

Three days afterward there was further effusion in considerable quantity, and at the end of a week it seemed fully as great as before, when, at the urgent request of the patient, the operation was repeated, with $9\frac{1}{2}$ pounds of matter as the result, which was horribly foetid, though I was not aware that any air had escaped into the pleural cavity at the first operation. At this operation—at which my friend Dr. Webb kindly assisted—the aspiration was continued till the patient complained of faintness and dyspnoea, and only serum slightly tinged with blood came away. Condition of lung and position of heart the same as before. Ten days after the operation was repeated, and again at the end of a week afterward. Total of matter evacuated, 28 lbs., which was extremely foetid after the first operation. Not far from a week afterward on Sept. 9th the patient's condition appeared but slightly improved, and a operation seemed as imperatively demanded as at any previous time.

At this time a careful study of the previous operations convinced me that, as the lung could not inflate, the parietes collapse, nor the heart return to diminish or help fill the pleural cavity, the effect of the aspiration was to create a partial vacuum in the pleural cavity, which was speedily refilled by a rapid outpouring of serum from the affected pleural surface from the atmospheric pressure, as was evidently the case in the second operation where only bloody serum was drawn at the last. And having some years ago seen a rapid recovery follow a spontaneous opening in a case of empyema, I determined to imitate nature in this case by means of an artificial opening, and efficient drainage. A drainage tube was constructed by passing the female tip of a compound catheter through a perforated coin down to a level with the open end, and soldering it firmly in its place. An opening was made; the tube pushed in till the button rested on the integument, a small pad covered by a

damp sponge applied, and the whole held in place by a broad bandage around the chest. For the first four or five weeks the discharge was very copious, but no more offensive than before, notwithstanding the frequent admission of air during the removal and cleansing of the sponge. Subsequently the discharge gradually diminished in quantity and improved in quality, till, at the end of eleven weeks after the final operation it ceased altogether, and the tube was removed.

During all the time the drainage tube was worn, the patient gradually improved, and since its removal very rapidly, till, at the present time he considers himself nearly well, though but a faint respiratory murmur can be heard over the upper portion of the lung, and the heart seems to have moved but slightly in the direction of its normal position. The parietes of the left side are also greatly collapsed, and the patient much drawn over to the affected side.

In conclusion, I am of the opinion that in cases where the walls of a cavity are yielding and free to collapse by atmospheric pressure on the removal of the contained fluid, and in pyothorax when the lung is not so far damaged but that it is capable of inflation *pari parsu* with the removal of the matter, aspiration must be admitted to be of undoubted advantage.

But in cases of pyothorax, where the walls of the chest are always unyielding; and where the lung is also so far injured by long compression as to be incapable of inflation; aspiration, carried to any great extent, can but result in the formation of a partial vacuum which can only be filled, either by the admission of air, or by the outpouring of serum from the pleural surface, which will be more or less rapid as the vacuum is more or less complete.

Dr. Oakley also reported a case of *diabetes mellitus*, and presented a specimen of crystallized diabetic sugar from a little girl five years of age. Saw her first Nov. 20th. Found her greatly emaciated and unable to stand alone. Pulse, 120; temperature, 96.4°. On inquiry learned that she had been passing large quantities of urine since late in the summer, all the while failing in strength and losing rapidly in flesh; was voiding

about 16 pints of urine in 24 hours. Sp. gravity, 1033; quantity of sugar by Robert's "differential density method," 27 grains to the fluidounce. At this rate she was losing about 14 oz. of sugar per day; an incredible quantity for so young a child. Prescribed the usual diet, and of equal parts of tincture of opium and tincture iodine, ten drops three times a day in mucilage of slippery elm. In three days under this treatment, the quantity of urine fell to five pints per diem, the relative quantity of sugar remaining about the same. No further effect of treatment was noted, the patient dying suddenly on the 24th. No autopsy allowed. Cause believed to have been a blow on the back part of the head with the blunt part of an axe in the hands of an older brother, just before she began to fail in health. In addition to the fermentation test, the doctor made use of another, a novel and rather striking one, founded on the well known reaction of sugar and chlorate of potash in contact with sulphuric acid. A portion of the urine was evaporated to dryness over a sand bath, and the residuum pulverized with about its own weight of chlorate of potash. When to this mixture was added a drop of sulphuric acid, the whole deflagrated violently, as was shown in the presence of the Society. The doctor stated that he had repeated the experiment with varying proportions of the diabetic with other urine, albumen, etc., with the same result. He thinks it may possibly prove an easy method of showing the presence of sugar; at least where it exists in any considerable quantity.

Dr. Ultes had a case of gun shot of arm to report, but for lack of time it was reserved with some other cases till next meeting.

Society adjourned to meet in Ann Arbor in March on call of Secretary.

W. F. BREAKY,
Secretary.

UNION MEDICAL SOCIETY OF NORTHERN MICHIGAN.

The Third Annual Meeting of the Union Medical Society of Northern Michigan, convened at Fireman's Hall, in the city of Greenville, on Tuesday, Jan. 11, 1876. Dr. Jas. Mulhern, the

President, in the chair. A fair representation was present from Big Rapids, Morley, Howard City, and other places along the line of D. L. & L. M. and G. R. & I. R. R. After the meeting was called to order the following members answered to their names: Drs. Wood, Phelps, Hendrix, Herrick, Bowes, Morgan, Mulhern, Sheldon, Nichols, Dowlman, Martin and Avery.

After attending to the necessary matters of an annual meeting, the society entered upon the regular business of the society and a clinic was presented by Dr. Bowes. Drs. Phelps, Avery and Martin, who were appointed a committee to examine the case, reported dullness and induration following a recent attack of pneumonia. Essays being called for, Dr. Hendrix responded with an essay on atomized medicines, setting forth their many uses and recommending the more frequent use of them in all diseases of the throat lungs and head. Remarks were made upon the subject by Drs. Dowlman, Nichols and Sheldon, all of which agreed with the author on the subject. Dr. Wood reported a case of pseudo membranous croup in connection with bronchitis; treated successfully with ice compresses over the throat and lungs, also slacking lime with the child under a blanket so that the patient was forced to breathe air strongly impregnated with the lime. Dr. Martin said he had often used lime with the best results, but never in this way; thought a better way was to have the air in the room saturated with lime and not use the blanket, as the patient could breathe better without it. Dr. Herrick said he had used a combination of lime, chlorate of potassa and carbolic acid inhaled through a teapot spout, with good results; believes it better than lime alone.

Dr. Avery then read a paper on necrosis. (See page 83 of this JOURNAL.) The society adjourned to meet at $1\frac{1}{2}$ o'clock, the discussion of Dr. Avery's paper to be taken up in the afternoon.

Called to order at 2 o'clock, when Dr. Avery's paper was discussed by Drs. Wood, Dowlman, Sheldon and Herrick, all of whom believed the writer in his paper had advanced the true theory of necrosis and the measures to be used for its relief. A motion was made and seconded that a copy of Dr. Avery's paper be

sent to one of the State journals of medicine for publication; carried.

Dr. Martin reported a case of typhoid fever treated with large doses of quinine. He gave from twenty to forty grains at a dose, after the plan of German writers in the Cyclopoedia of Medicine, as a febrifuge to lower the temperature. Dr. F. B. Wood did not believe that a German writer or any other foreigner, could tell us in Michigan how to treat typhoid fever or any other disease; that each practitioner should use his own judgment and not be bound down by any line of treatment. Dr. Phelps agreed with Dr. Wood and added that as Dr. Martin's case was not shortened but had continued for more than three weeks, he could not see any particular benefit over the old plan of tonics, stimulant, and the old line of febrifuges. Dr. Dowman said he had never seen a case of typhoid fever in this part of the country, consequently had never tested quinine, but presumed it might be beneficial at *least in such cases as were down with the fever one day and around the streets the next.* Dr. Bowes was in favor of the plan mentioned by Dr. Martin; believed he had a case of typhoid fever this fall and that he not only lowered the temperature but shortened the duration of the disease by quinine, in 40 grain doses. The subject was discussed by nearly all the members, most of whom were opposed to the plan spoken of by Dr. Martin.

A motion was made to proceed to the election of officers, and Dr. Bowes was elected President; Dr. Avery, First Vice President; Dr. F. B. Wood, Second Vice President; O. E. Herrick, Secretary; C. M. Martin, Treasurer.

After a few brief remarks by Dr. Mulhern, the retiring president, in which he thanked the society for the kindness shown him during his term of office, the society adjourned to meet at Big Rapids on the second Tuesday in April. Subject for discussion: alcohol, considered physically, mentally and morally.

The society again met in a public hall in the evening, by a previous appointment, and discussed the subject of Hygiene before quite a large and appreciative audience, at which time

quite lengthy speeches were made by Drs. Wood, Martin, Bowes and others. This matter of public evening discussions was an experiment with our society and I am happy to say has thus far proved a success, and the society believes it will be productive of much good, by educating the people upon medical subjects, so that they may discriminate between legitimate and bastard medicine. The next discussion at Big Rapids, upon alcohol, is to be public, in the evening after the regular session. This has been the largest and most interesting meeting our society has ever held, and each member feels that he has been benefited by it. Our society, which commenced about three years ago with only members enough for a quorum, now numbers twenty-six members, and in a few years we expect to become in the northern part of our State what the Southern Michigan Medical Society has become in the southern.

O. E. HERRICK,
Secretary.

ST. JOSEPH VALLEY DISTRICT MEDICAL SOCIETY.

ELKHART, IND., January 11, 1876.

St. Joseph Valley District Medical Society, called to order at 11:30. Dr. L. C. Rose, President in the chair. Drs. O. P. Barbour, South Bend; T. S. Putt, Middlebury; W. H. Hani, Middlebury; B. Larrimer, Millersburgh; P. D. Harding, Goshen, Ind., admitted as members. Dr. Ham, then read a paper on Ovariotomy. After calling attention to the vast proportions of the subject, as the anatomy, pathology, symptoms, complications, operators' methods, after treatment, &c., and the impossibility of doing justice to the subject assigned to him in the short space of time allotted, he quoted the words of Dr. Ephraim McDowell: "that the operation may be performed with safety by one possessing good judgment and a knowledge of the anatomy of the parts, but that he hoped it would forever remain incomprehensible to the mere mechanical surgeon." After speaking at some length of the difficulties and complications of Ovariotomy and the character and personal attainments

necessary to a successful operator, he recited Spencer Wells' assertion: "that this is the last operation to be undertaken by any but those whose daily work is to stop bleeding and close wounds." He then made a few remarks on the justifiability of the operation and the mode thereof, and considered the different steps settled, except the procedure to be adopted in the treatment of the pedicle. He reviewed the different methods and the objections to each, and gave his preference to the method by enucleation in all suitable cases," saying "that although other methods might be exceptionally advantageous, enucleation was better, as it allowed the retention of the pedicle within the abdomen, without risks from haemorrhage or necrosis of tissue. He thought that some other method would yet be introduced which would supersede all, yet practiced. He then gave a short *resume* of the operation as practiced by Dr. Spencer Wells. In the remarks following, Dr. Latta strongly urged earlier operative interference in ovarian tumors than was now advised by ovariotomists.

Dr. Latta then read a short paper on "fracture of long bones," alluding more particularly to the femur and to the results attained by Dr. Sayre, claiming that such perfection was not to be expected in general country practice, and that if it were, it would lead to an increased number of suits at law for malpractice. Dr. Ham thought that cases treated by the "screw" gave more uniformly good results than by the "weight and pulley." Dr. Dodge claimed that as adhesive plaster was used both in the application of the "screw" and the "weight and pulley," and as during the first 24 hours the plaster was sure to slip to a greater or less extent, the "weight" gave more steady, uniform traction than the "screw" could possibly do, thus keeping the ends of the broken bone more steadily in apposition.

Dr. Voorhees reported in writing, a case of chronic arthritis (knee joint), and exhibited the specimens removed by amputation. *Case "G. M."* aged 32, served during the war as cavalryman; previously had not known a sick day; no history of syphilis. After being in the service some time, the left knee became swollen and painful. Supposing it to be rheumatism,

he did not apply for treatment. Remained with his company till he was discharged at the close of the war, when he returned to the farm. The knee continued to trouble him, gradually getting worse till January 1st, 1870, when he fell from a wagon, alighting upon the diseased limb, (could not tell whether foot or knee.) The knee became enormously swollen and very painful and he was not thereafter able to extend the limb. October 24th, 1872, Dr. T. J. and myself were sent for to remove the limb. Found the patient in bed where he had been for 10 months, with no medical attendant except a "cancer doctor." Much emaciated and very weak, leg flexed at right angle to the thigh. Knee swollen immensely and covered with the openings of sinuses leading into the joint. Through one on the anterior of joint a piece of necrosed bone protruded. One sinus in the popliteal space leading into the joint admitted the index finger. Judging an immediate amputation the only resort (and this chance a desperate one), it was made at the middle of the femur. Much loss of blood followed, as the vessels gave way when ligated, due to degeneration of the walls, but the patient rallied nicely and made a rapid recovery.

Examination of joint—12 sinuses leading to its interior; muscular tissue in vicinity of joint entirely degenerated into fat. Tibia dislocated outwards, patella resting upon the external condyle of femur. Tendon of quadriceps extensor nowhere found; ligaments partially destroyed; synovial membrane filled with holes and pus; semi-lunar cartilages gone; cancellous tissue of femur and tibia carious; patella thickened by growth of osteophites. Projecting from the condyles of femur, were extensive osteophytes, these extending up the inner aspect of femur about 6 inches. A small portion of external condyle necrosed. The heads of tibia and fibula surrounded with these long growths and extending down the shafts about 4 inches. Remarks: It is my opinion that arthritis was produced while on duty, by concussion. After leaving the service, this was kept up by constantly using the limb, and that the fall from the wagon resulted in a dislocation, the ligaments being relaxed and weakened from the long continued inflammation. I think,

from the extensive fatty degeneration of the muscular structures, that muscular contraction could not have produced the dislocation. You will observe that the no cartilage intervenes between the condyle of the femur and the head of the Tibia.

Dr. Humphreys resigned the position as Chairman of the committee on "Admission and Ethics," and Dr. O'Connor was appointed to fill the vacancy.

After the regular order of business was finished, the Society adjourned to meet in Niles, Mich., the second Tuesday in June.

C. G. PIXLEY, *Secretary.*

*MICHIGAN STATE BOARD OF HEALTH, at its Meeting on
January 11, 1876.*

The first quarterly meeting for 1876 of the State Board of Health was held in Lansing, January 11. There were present Dr. Homer O. Hitchcock, President; Rev. C. H. Brigham, Dr. H. F. Lyster, Rev. J. S. Goodman, Dr. A. Hazlewood, and Dr. Henry B. Baker. Secretary Dr. Kedzie was necessarily absent on business for the State Board of Agriculture.

Rev. Mr. Goodman reported having attended, as a representative of the Board, the meeting of the Michigan Teachers' Association at Grand Rapids, where he had read a paper on "School Hygiene." He also reported as committee to investigate the sanitary condition of the common schools, that the work had not yet been completed, and on motion the amount voted for that purpose in 1875 was extended to 1876.

The President reported having attended, for the Board, the meeting of the American Public Health Association at Baltimore in November last; that the meeting was well attended, and many of the papers were of considerable interest. So many and so lengthy were the papers, that scarcely any time was given to discussion of the various subjects of interest which had been named by the executive committee.

On recommendation of the President, it was voted that Dr. E. H. Van Deusen, Medical Superintendent of Asylum for Insane, at Kalamazoo, be invited to prepare a paper on Mental Hygiene.

The Secretary was directed to send the Reports of the Board to the Centennial Exhibition. The Secretary read his quarterly report of work done in the office since the last meeting. From this it appears that blanks for annual reports of local boards of health, and a circular of instructions had been sent to the clerks of 1,184 boards throughout the State. Replies from 404 clerks had so far been received. These reports are each year becoming more numerous, complete and satisfactory. In October a circular relative to water supply was published and sent to the correspondents of the Board. Replies were received from thirty-six correspondents, of which twenty-five, or the number received up to November, are printed in the report for 1875. Among the publications of the office since the last meeting are twenty-five thousand four-page pamphlets on "Treatment of the Drowned," for distribution to the school population; five thousand eight hundred circulars to school directors; five thousand eight hundred circulars to school teachers; also a circular to editors, which, together with a blank meteorological register, and a circular on water supply, was sent to each of the two hundred and seventy periodicals published in Michigan. A circular relative to prevailing diseases was published and sent to correspondents. Replies are now being received. These replies are valuable, as were also those on water supply. It is believed that the Board will receive much valuable aid in its work from these gratuitous efforts of its correspondents. By considerable effort and correspondence, reliable meteorological observations have been secured at ten stations within this State, and a few in other States. The observers in Michigan are: John Bell, M. D., Benton Harbor; Henry F. Thomas, M. D., Allegan; Lyman P. Alden, Coldwater; E. H. Van Deusen, M. D., Kalamazoo; Prof. J. Estabrook, Ypsilanti; H. T. Calkins, M. D., Fyfe Lake; J. H. Kellogg, M. D., Battle Creek; J. S. Reeves, M. D., East Tawas; C. Henri Leonard, M. D., Detroit, and R. C. Kedzie, M. D., Agricultural College, Lansing.

The printing of the annual report for 1875, has been nearly completed. The preparing of the illustrations and manuscript, and reading of the proof on this report has formed part of the work of the office since the last meeting.

A communication from Dr. J. B. Hull, of Lansing, relative to the cause of chorea in the public schools, was read and referred to the Committee on Education as related to health, and it was voted that Dr. Hull be requested to report more fully at some future time. A communication from F. H. Seymour, Statistician of the State Firemens' Association, offering to furnish statistics of the causes of fire in Michigan, to the Reports of the Board, was read. The Secretary was authorized to accept the same, subject to the same conditions as other matter furnished to the reports of the Board. A communication from J. S. Reeves, M. D., of East Tawas, relative to the topography and sanitary condition of his locality was read. It was voted that he be requested to make additional enquiries and report results to the Board. The Secretary read several communications from persons in this State and in other States, bearing upon the inspection of illuminating oils. Considerable discussion ensued, in the course of which the Secretary read a paper on the subject, in which he stated that complaint had been made to the Board that :

- 1st Of late the oil does not burn well.
- 2d. Inspection is performed by the State Inspector outside of the State.
- 3d. There is no local inspection as contemplated in the law, because the State Inspector requires his deputies to pay him one-half they earn.

The test also is complained of as being too high; but this comes from dealers and others who think they are interested in preventing legal restrictions on the sales.

There are two reasons why, during the past few months, the oil in use has been unsatisfactory in its lighting qualities. One is due to the degeneration which may occur in the best kerosene oil from exposure to light. The main cause, however, lies in the fact that refiners have found a way to sell the waxy products which distil over after the best oil has been distilled out. By mixing this with the more volatile oil, a product results which will stand the legal requirements of this state, but which gives a very inferior light, coats the wick, and causes it to char, and causes the lamp to become much more heated than does either

the volatile or the heavy oil when free from paraffine and tarry impurities.

To meet the second of the complaints stated the secretary submitted the following preamble and resolution:

Whereas, The State Inspector of illuminating oils in this State, has for reasons, some of which are stated in a *report* by him on page 90 of the forthcoming report of this Board, performed inspection and branded barrels of oil at Cleveland, Ohio, the same being without the limits of this State ; therefore,

Resolved, That the secretary of this Board be directed to obtain the opinion of the Attorney General of this State concerning the legality of such inspection, under the present laws of this State, and report to this Board at its next meeting.

This was not adopted.

Mr. A. A. Day, State Inspector of Illuminating Oils, appeared before the Board and read a review of the custom of the trade as connected with the system of oil inspection adopted by him.

After some discussion the following resolutions were adopted:

Resolved, That this Board is in no way responsible for the manner in which the provisions of the law requiring the inspection of oils have been executed.

Resolved, That the almost entire absence of accidents from the use of dangerous oils in this State during the past six months, emphatically justifies the position and efforts of this Board in procuring an efficient inspection of oils.

Resolved, That the numerous complaints of bad oil sustaining the flash test of 140° F., now brought into this State, are in no way chargeable to the inspection or the required test, but to the efforts of manufacturers to make an inferior oil sustain our test by mixing with it oil containing paraffine.

Resolved, That a brand of oil free from paraffine and bearing the Michigan test, should be demanded by all consumers.

Correspondence.

MESSRS. EDITORS.—I reluctantly ask for a space in your journal for a personal statement of my own relations to the unfortunate homœopathic complication in the University, and for a short reply to various misapprehensions and unjust criticisms respecting the “statement” of the faculty as to the relations of homœopathy to the department of medicine and surgery. Neither your space nor my time will at present allow of more than a partial presentation of the facts of the case, reserving for the future, should occasion demand, a more full consideration of the whole subject.

In the first place, I wish to say, what all familiar with the facts know, that ever since the subject of the introduction of homœopathy into the University has been agitated, I have uniformly and firmly opposed it and everything which I thought might lead to it—and I have especially opposed with more vehemence than many of my friends thought judicious, any relations of this system to our medical school. Besides my own personal opinions and feelings respecting the system, I have known how deep was the general feeling of our profession against it, and how intolerant that profession would be of even the remotest relations with it. I knew full well of the “souvereign and immitigable contempt,” as Dr. Gross expresses it, of “every member of the regular profession” for the system and organization of homœopathy. I knew of the excitement which its establishment at the seat of the University would produce, of the occasion it would give for rival schools to excite opposition to us; I knew of the mortification which would follow to our alumni and our friends. I knew of the disturbance of our peace; of the probable withholding of support and patronage on the part of some. I knew how any *intimate* association would ruin the school we had been so successful by long years of labor in building up; and hence, in the interests of advanced medical education, in the interests of our alumni, in the interests of the University in general, and especially in the interests of the medical department, this opposition has been kept up. My aversion to the whole thing has never abated, and is felt at the present moment as strongly as ever before.

The history of the act of the legislature and of the resolutions of the Board of Regents establishing the homœopathic college, so far as my relation to it is concerned, is briefly told. Sometime in February or early in March, 1875, I visited Lansing and conversed with several members of the legislature on the subject of homœopathy in the University, and respecting the bills for the establishment of a mixed Board of State Censors; expressing my opposition to the latter project, while I was assured by the

friends of legitimate medicine in that body that there was no danger of the medical department being in any way embarrassed by any legislation, connecting us in any way with homœopathy; that if any thing was done it would be to establish an entirely separate school in some other part of the State, and from the general tone of feeling I observed there, I rested firmly in the conviction that the medical department would not be disturbed.

Not long after this, a meeting of the medical faculty of the University was called to consider whether any action could be taken in reference to the homœopathic question. A free discussion was held, and as usual, I strenuously opposed any action looking toward the remotest relation with it. Indeed no definite action was by any one proposed, and the general expression was as usual averse to any connection with it however remote. This was all that occurred in the faculty of which I had any knowledge up to the middle of April, when I left for Maine, not returning to Michigan until the latter part of July. For a knowledge of what occurred in the Legislature, in the Board of Regents, and in the faculty on this subject, during this interval, I am dependent upon the public records and the statements of others.

From these records I find the bill authorizing the Regents "to establish a Homœopathic College, as a branch or department of said University, which shall be located at the city of Ann Arbor," was approved April 27, 1875. The resolutions of the Regents establishing the details of this "branch or department,"—the first resolution being "that a Homœopathic Medical College be established in the city of Ann Arbor," was passed May 11, 1875, and the first knowledge or intimation I had of such action as had occurred was by means of a letter from Dr. Sager stating some of the features of the action, but expressing no definite opinion as to its character or effect. I answered the letter, deprecating the arrangement in the strongest terms, expressing my surprise and chagrin, and about the same time wrote to the President of the University, who is also President of the Board of Regents, expressing at still greater length my surprise, my objections and regrets; but saying as the act was accomplished and could not at the present be reversed, I felt it my duty to stand by my post, so long as my liberty of expression on the subject of homœopathy was not interfered with, and so long as I was not called upon to associate in any professional way with homœopaths, or to recommend as fit for practitioners or for professional association homœopathic students. I was assured that no requirement of the kind would be made, and none has been, while my liberty of expression has in no way been abridged. I have performed my duty to the medical class as heretofore, teaching what I believed to be the true principles of medical science, and opposing, as I thought the truth and circumstances required, any views which I regarded as erroneous or absurd.

This is the exact history of this affair so far as I am personally concerned; and whoever contradicts directly or by implication any of these material statements, contravenes the truth.

I should not have deemed this account necessary had not efforts been made, at least by implication, to produce other impressions.

In considering the course and responsibility of the faculty, it should be borne in mind that the University of Michigan, or its Medical Department, is not a private institution under the control of its faculty, but that it belongs to the State, and is under the control of the people through their representatives, the Legislature and the Board of Regents. The members of the Faculty of Medicine and Surgery, while maintaining their positions as public servants, are bound by the authorities and the laws which are above them. Their only means of escaping from what this authority decides, is by resignation. Should anything be demanded of them which they regarded inconsistent with their honor or their duty to the profession, they would doubtless resort to this alternative. But no such demand has, in their estimation, been made; and to abandon their positions in the absence of such demand, would be, without justifiable cause, to turn the University over to the unopposed promulgation of a system of absurdity and folly. This, they are, confident the profession would not justify them in doing, and this their own sense of duty has not allowed them to do.

It should also be understood and remembered that the members of the faculty were scattered, many of them being away at their summer's work or vacation during these events, and were not all together until near the opening of the college in October; and as the commencement of the session approached, and numerous enquiries as to the relations of the new department were pouring in, those who were on the ground considered it their duty, in justice to the Legislature, the Board of Regents, the college and themselves, to put forth a statement of the facts just as they existed, without prejudice or concealment, to declare their own irresponsibility in the matter, and leave it for the authorities, the profession, and the public to judge and act as they should see fit. This is the record the faculty, as a body, have so far made, and by it they must be judged.

A few words in regard to the "Statement of the Relations of the Faculty of Medicine and Surgery to Homœopathy":

Although this statement, after proper examination and discussion received the approval of all the faculty, who were in Ann Arbor at the time of its preparation (Drs. Ford and Dunder alone being absent), and was put forth by their order and on their behalf, yet it was written by myself, and for it I am quite willing to take the full responsibility, as nothing was put into it contrary to my wishes. It is true that some of the facts stated were derived from the testimony of others, but I

have yet to learn that such testimony was incorrect, and I now with a full sense of personal responsibility, unhesitatingly declare that *every paragraph, every sentence and every word, so far as I know and believe, is literally, strictly and exactly true.*

The first proposition in the statement, which so far as I know, has been assailed, is, that the faculty had no responsibility in the enactment of the law of the legislature or in the establishment of the details by the Board of Regents. On this point, my knowledge is not personal, except so far as relates to myself, as I was in a distant State during the whole affair, but there is no record of faculty action assuming any such responsibility, and I am assured by my colleagues that no such responsibility was assumed; and this, together with the positive assertion of Regent Rynd, who was chairman of the committee of the Regents which had the matter in charge, must be considered as conclusive. It is true, as I am informed, that the portion of the faculty, who were in Ann Arbor, were called to meet the chairman of the committee to have the plan of organization of the Homœopathic College presented, and to hear what might be said respecting it. From this meeting, Dr. Sager, who was then Dean of the faculty, for reasons of which I have never been informed, absented himself—or if the expression be preferred, was in town, had notice of the meeting, but was not present. At this meeting composed chiefly of the younger members of the faculty, three of the older members Drs. Sager, Ford and myself, being absent, all but Dr. Sager, out of the State, those present had this matter, as they state, sprung suddenly upon them, had not time for mature reflection, and in the absence of so many of the faculty chose to take no responsibility respecting what they regarded as a foregone conclusion, and neither assented to or dissented from the proposed action. That they did not dissent, some of them, I am authorized to say, now regret. But for this or any other individual conduct, these gentlemen are fully competent to answer for themselves, should they deem it necessary so to do. The President of the Board of Regents, informs me that Dr. Sager's objections to the plan of the Regents, if he then had any, were not known to the Board till so long after their action upon it that he was much surprised that any objections were entertained by him.

The next item in the "statement" of the faculty to which exceptions have been taken, is that in which it is averred that "the diplomas to be granted are different in title and character—those of the homœopathic students are to be designated as Homœopathic; the names of none of the faculty of the department of Medicine and Surgery are to go upon them, and of course the names of the faculty of the Homœopathic College are not to go upon those of the other departments." *This is simply and literally true.* But it is objected that the inference is, that the diplomas are to be signed as heretofore. This is not so

stated, and is not a necessary inference. The Regents, it is true, made a provision for having all diplomas of the University signed officially by the President and Secretary of the Board alone, but I had reason to believe that there would be no objections to the members of our faculty placing their names on the diplomas as a sign of their approval of the degree, and as commending the candidate to the profession; and members of the Board of Regents have expressed their entire willingness that the names of the faculty should be placed upon the parchments; and it is expected they will be so placed. Where, then, is the misstatement in this?

— But the most serious charge of misrepresentation is in regard to the following: "The faculty of the College of Medicine and Surgery does not recommend for graduation, and has no responsibility whatever in sending forth or licensing to practice (as was to have been done by the mixed board proposed by the State Society), homœopathic students, or testifying to their fitness to become members of the medical profession."

This too is simply true. The Medical Faculty *does not recommend them for graduation*. The Dean of the Homœopathic Faculty does that by the express terms of the resolution of the Board. The Faculty of Medicine and Surgery does not send them forth. The Board of Regents does that. The license to practice is in the Diploma and the Regents confer that—and in no sense and in no way does the Faculty of Medicine and Surgery testify to their fitness to *become members of the Medical profession*. They are prepared to testify at any time and anywhere that men professing to believe the absurd dogmas of Homœopathy, are in their judgment, not fit to become members of the medical profession. Where then is the incorrectness of this statement, except in the prepossessed imagination of our accusers?

It is not said that none of the faculty teach these men certain branches, and certify to their proficiency or want of proficiency in such branches. On the contrary, in the very next sentence it is stated that such teaching does occur, and that such certificates are to be given, and no attempt is made to deny any responsibility which such teaching involves. The Professors of Anatomy, Chemistry, Surgery and Midwifery do lecture to these men, and I suppose will examine them, if so be that any shall come forward for examination, and will certify to their qualifications in these branches; but I am most happy to say that my colleagues are not asked to intimate "that these students are qualified to practice medicine or to be proper professional associates of medical men." I presume they would not do so if asked.

The students of the Dental College attend the medical lecture, and are instructed by the medical professors, but these professors do not pretend to judge of their qualifications as dentists, and take no responsibility in sending them forth as practitioners of that art.

But a great quibble (for no better term can distinguish it) has been made respecting the use of the word *privilege* as applied to the homœopathic students attending the lectures in the Department of Medicine and Surgery. The resolution of the Board making the arrangement, says, the homœopathic students "shall be entitled to all the *privileges* accorded to students in the Medical Department" respecting "instruction" in the branches not provided for in the Homœopathic Medical College; and following the language in the resolution of the Board, the President of the University who may be supposed to know the force and propriety of words, uses the term *privilege* in his official report on this very subject in precisely, the sense it is used in our "statement." From our point of view, and from every point of view it was a *privilege* granted to the students of the Homœopathic College to attend the instructions in another department, but this privilege entailed obligations which in the "statement" were indicated. If anything could demonstrate the weakness of the criticism on the "Statement" it would be a petty verbal quibble such as this.

I have chosen to make this reply to assailants entirely impersonal and have avoided impugning the motives of any; but I must now say that whoever hereafter, in the light of the subject as now presented, shall continue without recantation any statements or insinuations of misrepresentations in the "statement" of the faculty, certainly on the points alluded to (and these are the chief and the only ones requiring attention) must be considered a *false accuser*.

In thus defending myself and my colleagues from unjust accusations, it is farthest possible from my intentions to take issue with those who would inaugurate any judicious movement for the removal of the relations with homœopathy which actually exist. That both the Legislature and the Regents, with doubtless the best of intentions, made a grave mistake in establishing these relations, is my most firm conviction; and that both will see the error and hasten to rectify it, is my most ardent wish. Opposed as the arrangement seems to be by a large portion of the homœopaths, and obnoxious as it certainly is to the great body of our own profession, the experiment having thus failed to give satisfaction to any, have we not ground to hope that as soon as it can be accomplished, the complication we deplore will be effectually removed?

Truly yours,

A. B. PALMER.

EDITOR PENINSULAR JOURNAL OF MEDICINE.—Sir—The venerable Doctor Sager, in spite of the most ample information to the contrary, still persists in holding me responsible for a certain editorial article, in your JOURNAL, which you know that I did

not write and for which I did not furnish one vestige of material or information, and for which I am in no sort of way responsible.

It does not matter much to the profession or to the world at large who wrote or inspired the obnoxious article, and I will certainly not argue the matter any further with Doctor Sager. But this I will say, that the passage in that article to which Dr. Sager most objects and which he characterizes as "unfounded and calumnious," is to my certain knowledge the *simple truth*, and in proof of my assertion I appeal to President Angell and Professor Cheever.

DONALD MACLEAN.

ANN ARBOR, February 7, 1876.

Ars, ante omnia veritas.

Editorial.

THE PHILADELPHIA MEDICAL TIMES AND HOMŒOPATHY IN THE UNIVERSITY.

We append herewith an editorial from the *Philadelphia Medical Times* of the 8th inst., in reference to the Homœopathic complications in the University, to which we invite the attention of our readers. In explanation of it, we have only to say, that the *Times* first took strong, and as it seemed to us unassailable ground in favor of the Faculty. Then, on the publication of Dr. Sager's explicit charge of collusion it retracted its position and now on a correct statement of the facts it again very appropriately acknowledges its error. We have believed all the while that Dr. Sager's oft-repeated charge, which makes the Faculty directly responsible for the introduction of Homœopathy into the University, was wholly gratuitous and would not stand a moment's investigation. Opinions may, and in the very nature of things must differ as to the wisdom of the position taken by the Faculty after the action of the Board of Regents, but on this one point of the original responsibility there can be no difference whatever. Dr. Rynd's letter alone should for ever silence this accusation, for it is virtually an official assumption by the Board of Regents of the entire responsibility.

We are permitted to quote from Dr. Rynd's letter, a sentence which does not appear in the *Times*, it being unessential to the question that that journal was discussing. We publish it for the simple reason that it confirms in a most unexpected manner the assertions we have already made regarding Dr. Sager's much talked of scheme for averting the trouble. This scheme we

have said was an after thought and was never mentioned until long after all parties were committed to the present plan. Dr. Rynd says: "Dr. Sager, then the *Dean of the Medical Faculty*, did not in his official relationship with the *Board of Regents* interpose any objection to the "plan of organization" while it was being effected or for several weeks thereafter."

The editor of the *Times* has inadvertently fallen into an error which in itself is of no consequence, but inasmuch as charges of malicious and wilful misstatements are so freely bandied about in this unfortunate controversy, we correct the error lest it may be put forward as another evidence of the total depravity of the University authorities. The letter to which the *Times* alludes was not written by the Dean but by another member of the Faculty to whom was delegated the task of making the reply.

"Our readers will no doubt remember our editorial notice of Dr. Sager's charge that the Medical Faculty of the University of Michigan were really in collusion with and aided in the movement which fastened homœopathy upon the institution. We have received a letter from the Dean of the Faculty, in which this charge is met by a denial in detail. The communication is entirely satisfactory, but is too long for our columns. Moreover, the gist of the matter is contained in the following extract from an official letter written to the Dean of the Faculty by one of the Regents, Dr. C. Rynd:

"No member of the Faculty ever intimated to the undersigned, nor, so far as my knowledge extends, to any member of the Board of Regents, their willingness to accept any arrangement, or make any compromise, which would permit the establishing of homœopathy at Ann Arbor.

"The action of the Regents was the result of what they believed a necessity,—unavoidable in view of the dependence of the University upon the Legislature,—and not in any sense contingent upon the opinions or probable action of the Faculty.

"The Faculty did not enter into any agreement with the Medical Committee at the preliminary meeting on 7th of May last.

"The grant of six thousand dollars per annum for homœopathy would not have enabled the Regents to establish a homœopathic college, with a full corps of instructors. They did not wish to duplicate chairs for the teaching of fundamental or elementary studies, and appointed two homœopathic professors, thinking this would be better for the regular school, fairly satisfactory to the homœopathists, and in strict accordance with the intention of the Legislature.

"In a word, my dear doctor, as you may well know, the sole question to be settled by the Faculty was, whether it were wiser to 'accept the situation' and stand up for rational medicine, or 'step down and out.' The Regents did not propose to offer any

different terms of settlement, and were prepared to meet whatever emergency might arise. Faithfully, and, I believe as time will demonstrate, wisely, you accept the situation *in the presence of an accomplished fact.*"

WE do not feel an apology necessary for the space we have allowed to the communications on "Homœopathy in the University." The question is one of vital importance to the profession, and more particularly so to the profession of Michigan. The struggle which has lasted for a quarter of a century, is soon to culminate, and it behooves the profession calmly and dispassionately to consider the question in all its bearings, so that at the approaching meetings of the State Medical Society, and the American Medical Association they may by their votes give it an answer which will be final. While we maintain, as we have always done, that the faculty have done their duty under the circumstances, none will more cheerfully acquiesce in the decision of the profession in its sovereign capacity, as it shall be expressed in its representative associations. Until that decision is given, however, there is room for discussion, and we shall be pleased to receive the views of our readers.

A NUMBER of Selections and Translations, and the notice of a number of books and pamphlets which have accumulated on our table, is unavoidably deferred until next month.

METEOROLOGICAL REPORT. C. HENRI LEONARD, M. D., Observer.

BAROMETER.—Highest, 30.579; lowest, 29.215; range, 1.366; average, 30.004.

TEMPERATURE.—Highest, 65; lowest, 9; range, 56; average, 32.4.

WINDS.—Greatest velocity per hour, 36 miles; prevailing direction, west, (10 days W., 6 S. W., and 4 N. W.); total number of miles "traveled," 7,150.

RAIN AND SNOW fell on 19 days, only two clear days; total depth, two inches; greatest amount at one time, .47 inches; mean humidity for the month, 73.7 per cent.

OZONE present on 24 days; maximum coloration (State Board of Health scale) $2\frac{1}{2}$; this was on the 20th of the month; always found in day time if present at night; only five nights was the paper discolored.

SULPHURIC ACID present on four days, only two, however, to vary the tint of the paper one degree, according to the scale. This was upon the 18th and 19th, giving for a 24 hours exposure a bleaching of three degrees. The greatest humidity of the month was upon the 18th, it being 100 at 7 a. m. and 2 p. m. "Sore throats" especially prevalent at that time. The maximum of Ozone was on the day following, when, so far as I observed, throat symptoms greatly ameliorated. There were 4.01 grains of vapor in cubic foot of air at 7 a. m. of the 15th inst., 3.88 grains at 2 p. m., 3.48 at 9 p. m. This was the maximum day for the month. For full two-thirds of the day there was a dense fog. The remaining days when "traces" of the acid were found, were marked by a correspondingly high humidity.

*MORTALITY REPORT OF THE CITY OF DETROIT FOR
THE MONTH OF JANUARY. Prepared from Statement fur-
nished by C. H. BORGMAN, Esq., City Clerk.*

I.—ZYMOTIC DISEASES.	
Cerebro Spinal Meningitis.....	1
Cholera Infantum.....	1
Croup.....	3
Diphtheria.....	1
Measles	10
Syphilis.....	1
Scarlet Fever.....	1
Typhoid Fever.....	2
Whooping Cough.....	2
—	—
Total.....	22
II.—CONSTITUTIONAL DISEASES.	
Albuminuria	2
Cancer.....	3
Consumption.....	18
Debility.....	8
Dropsy.....	1
Hydrocephalus.....	2
Insanity.....	1
Old Age.....	2
Rheumatism.....	1
Worm Fever.....	1
—	—
Total.....	39
III.—LOCAL DISEASES.	
Asthma.....	2
Bright's Disease.....	1
Congestion of the Lungs.....	1
Congestion of the Brain.....	3
Convulsions.....	11
Glandular Tumor.....	1
Heart Disease.....	3
Inflammation of the Bowels.....	4
Inflammation of the Brain.....	2
Pneumonia.....	12
Paralysis.....	1
Teething	3
—	—
Tonsillitis	1
Tumor	1
—	—
Total.....	46
Stillborn.....	15
Unknown.....	4
Accident.....	1
—	—
Total.....	20
NATIVITY.	
Detroit	80
Germany.....	8
Canada	4
United States.....	15
France	2
Ireland.....	9
Poland	2
Bohemia.....	1
Scotland.....	2
Austria.....	1
England	2
Sweden.....	1
—	—
Total.....	127
AGES.	
Ten years and under.....	78
Over ten and under thirty.....	12
Thirty and over.....	37
—	—
Total number of deaths.....	127
Estimated population.....	105,000
Estimated annual death rate in 1,000, from Jan. deaths 14.51 PER CENT. TO TOTAL MORTALITY.	
Zymotic diseases.....	17.32
Constitutional diseases.....	30.71
Local diseases.....	36.22
Under ten years.....	61.42
Between ten and thirty.....	9.45
Over thirty.....	29.13

*MORTALITY REPORT OF THE CITY OF LANSING. From
Statement by DR. H. B. BARKER.*

DISEASES.	
General debility.....	1
Scarlet Fever.....	1
Apoplexy.....	1
Convulsions.....	1
Nervous prostration.....	1
Inflammation of the Liver.....	1
Consumption.....	2
—	—
Total.....	8
Estimated population.....	844
Deaths in January at annual death rate in 1,000.....	11.20
NATIVITY.	
Canada.....	1
Michigan	3
Vermont.....	1
Germany	1
Connecticut.....	1
Lansing	1
—	—
Total.....	8
AGES.	
Under ten.....	1
Over ten and under thirty.....	1
Thirty and over.....	6
—	—
Total.....	8

THE
PENINSULAR JOURNAL
OF MEDICINE.

MARCH, 1876.

Original Communications.

A CLINICAL LECTURE ON PARESIS, OR FAILURE OF MUSCULAR POWER. (Third lecture.) By A. B. PALMER, M. D., Prof. of Pathology and Practice of Medicine, in the Department of Medicine and Surgery of the University of Michigan.

GENTLEMEN.—Since the last lecture on the subject of *paresis*, four additional cases have presented themselves, where more or less loss of muscular power was a prominent symptom; and before proceeding in the promised remarks on the therapeutical principles concerned in these forms of disease, I will ask your attention to a review of the history of these additional cases.

The first of these, or the eighth of the series, was that of Mr. F. R., aged 27, farmer, married three months before, whose residence is in the western part of the State, and who was at the clinic on the 16th of February 1875.

He informed us that as boy and man he had been very vigorous and athletic, and accustomed to the most active labor and sports.

He had passed successfully through the usual diseases of childhood, though when a lad from a cut on his foot he had had "erysipelas" in it, which lasted for seven months, but he recovered from this, he thought, completely.

He informed us that he had indulged in occasional "sprees," but had never been a habitual drinker, and had used very little tobacco. Though he thought he had been what might be called "rather a fast boy," yet he thinks his health has never been injured by any form of excess.

Six years ago on a hunting excursion he accidentally got into the water, and soon after had "numbness" of his left foot and leg—could not "handle it right;" but this state disappeared after three or four weeks. In the summer of 1872, he was hard at work and much exposed in a malarious region, drank surface water, etc., when the "numbness" of the same leg came on again much as before, continuing four or five weeks and again disappeared. Not far from this time and after, he had several attacks of malarial fever, and at one time was for three months more or less under its influence and for three weeks was severely ill.

Last May he had "numbness" of the right hand, which after a while improved, but it is still "numb and weak." Two months before his visit to us he was obliged to quit work—had headache, sickness of the stomach, and general bad feelings. After taking some cathartics he improved in general condition, but soon his eyes "blurred" so that he was unable to read, though during the earlier part of his attack he had read much, and now the "numbness" returned, most in the left leg, but some in the right as well. He said there had been defective vision in his right eye for a long time, but now both eyes are so defective that though he can for a moment see the letters of ordinary print, they soon run together so he cannot read.

As you saw, his gait was unsteady, sometimes partly staggering, with dragging of the left foot quite marked. The special

defective co-ordination of movements was not more marked than the loss of power. There was deficient sensibility, particularly of the left foot—a feeling as if a “wad of cotton” was under the foot, and he had difficulty of standing with his eyes shut, still he could maintain his balance and walk, but more awkwardly with the eyes closed.

You observed this gentleman was rather pale; and his skin, pulse, respiration, appetite, digestion, thirst and condition of bowels appeared in a fairly normal state—there was at least no marked improper condition apparent, though his tongue was slightly coated.

It was to be regretted that we failed to have a careful examination of the eyes with the Ophthalmoscope, but expect to have that done at his next visit.

The urine was carefully examined, as should always be done in cases of this kind, and the indications afforded by it were of much value. The quantity passed in twenty-four hours was not accurately ascertained in consequence of his short stay, but was judged to be not far from normal. Reaction was acid; specific gravity 1030. The microscope showed crystals of *oxalate of lime* in *very great abundance*. The chemical examination showed *phosphates in great excess*, and urea in excess; and mucus was mingled with the crystals of the oxalates.

I recall thus minutely the features of this case, as all these particulars are important in forming a diagnosis and the indications for treatment. In all cases, especially of obscurity, you cannot be too minute in ascertaining and recording the phenomena.

Although this was not a typical case, yet the apprehension was expressed that in time there might be found a more perfect development of that most obstinate form of want of co-ordination and failure of muscular power known as *Locomotor Ataxia*, or at least a progressive form of paralysis dependent upon organic changes of certain nerve matter. Still a hope was expressed

that the extreme oxalæmia as manifested by the oxalates in the urine, together with the effects of malarial poison may have induced these symptoms, and that by the removal of these conditions decided improvement might possibly occur. As the malnutrition resulting in oxalæmia seemed the most prominent remediable condition, it was selected as the point of attack, and the patient was directed to take Dilute Nitro-Hydrochloric Acid in doses of thirty drops, thrice a day largely diluted after meals, and to increase the dose if no irritation of the stomach was induced, up to fifty or sixty drops. He was also directed to take occasionally for a few times, a few grains of blue mass followed by a saline laxative, with the hope of modifying favorably thereby the action of the digestive organs.

Although a variety of quite severe nervous symptoms is often produced by oxalate of lime in the system, including motor as well as sensative, yet I have never seen so much disturbance of the motor functions as in this case from that cause, and I fear we shall be obliged to attribute the symptoms of other pathological states—to degenerative changes of vesicular nerve matter.

Case ninth, though seen by only a part of the class, yet having features resembling the last, and perhaps in the future history, if not so much in its past, being capable of throwing light upon this subject, I will refer to in some detail.

Mr. E. L. F., also from the western part of the State, age 48, married, farmer—a resident of Michigan for thirty years—presents the following medical history: No hereditary predisposition to disease, general health has usually been good. He served in the Middle Division of the Western Army for three years during the war of the rebellion—most of the time in Tennessee, was not seriously ill during the time, but has had attacks of malarial fever nearly every fall since. He had an injury when a boy by a cart-wheel running over his body diagonally, affecting most his shoulder and hip. He was about soon after

the accident, but thinks he has had some weakness of the back and breast since, as the result of the injury.

His habits have been temperate and correct, with the exception of the use of tobacco by chewing, which has been quite free of late. His general hygienic influences aside from a residence in a somewhat malarious locality, have been as good as those of laborious, well-to-do farmers generally. He said his appetite had been good and he was a free eater.

After a few days of unusually severe labor last August he was attacked with a chill, severe pain in the head, and fever. The next day he was better and able to be up, but the day following, forty-eight hours after the first chill, was seized again, the paroxysm assuming a congestive form, producing insensibility—quite complete coma for some hours—(apparently pernicious tertian malarial fever). He was treated by quinine, etc., but he continued to have what his physician called “spinal chills” daily for four or five weeks.

He (the patient) described these as consisting of depression, chilly sensations, pain in the back, etc., and on one occasion very chilly sensations ran down his right leg, and he was entirely unable to move the limb for four or five hours.

Since this attack he has not been well, and has remained much in the condition as at the time of consulting me.

He was troubled about walking from *weakness*, stiffness and some pain in his right leg and hip.

His gait was sluggish with some dragging of the affected limb. Had much pain in the forepart of his head—almost unendurable unless he was under the influence of a medicine which from its taste and effects I judged to be a mixture containing largely bromide of potassium; complained of much “bloating” of the abdomen, often coming on suddenly more extreme, but the upper part of the abdomen was constantly fuller (or tenderer) than natural, as his clothes had to be enlarged. He was not especially anaemic, was in a fair state of flesh, his skin, pulse, respiration, appe-

tie, thirst, digestion and functions of the bowels reported not particularly unnatural. His tongue, however, as in the last case was coated with a thin, yellowish white coat. He had pains in various parts of the body, but more particularly under the right shoulder blade continuing for the last year.

Though he could see the letters of ordinary print, he was unable to read for any length of time from a sense of fatigue and "blurring" of the page. He was unable to do any work and represented himself as being very "nervous."

An examination of the urine gave an acid reaction, specific gravity 1036, crystals of *oxalate of lime* very abundant, mucus mingled with them, otherwise normal.

Here again as the oxaluria presented the most inviting point of attack, and as it seemed a most important factor in the case, contributing with the effects of the malarial poison, and the congestion of nerve centers consequent upon the former severe attacks, to produce the symptoms, the Nitro-Hydrochloric Acid was prescribed in the same manner as in the previous case, and a pill composed of ten grains of extract of Conium Merculatum and one-twentieth of a grain of Biniodide of Mercury, to be taken each night for five nights, and then one every second night for five nights more. He was also advised to continue for the present, the mixture (Brom. Pot.) for quieting his pain and nervous symptoms.

I hope for decided relief of these symptoms in this case from the treatment instituted. I should add that I forbade the use of tobacco, and directed a plain, simple, but nourishing diet.

Case tenth, you will all distinctly remember from its striking and unusual features, and from having more than once been present at the clinic.

L. S., a girl of German parentage, from the southern part of the State 22, unmarried, rather full figure, strong and robust previous to her present difficulty.

The first that was noticed wrong about her, not far from

year ago or something more, she seemed "stupid," as her father said, and "took notions in her head," the exact character of which I could not understand, but something in relation to marrying. She was restless and discontented, wished to change her place and occupation. Soon it was observed there was a failure of muscular power, more in the right side. She became clumsy and awkward in her gait, often stumbled, and still more frequently dropped things, especially from the right hand. The general cutaneous sensibility was not much impaired, but the right hand especially "felt numb."

These conditions affecting more or less all the members of the body, were slowly but steadily increased until the condition in which you saw her was attained.

You remember the expressionless, or intoxicated appearance of the face: the thick, indistinct speech; the stumbling gait; the difficulty of rising from her seat; the strabismus and double, but indistinct vision; the expression which induced some one to inquire whether she were not suffering from extreme *Bromism*, or the intoxication of the Bromide of Potassium. You remember too the frequent emotional excitement manifested by frequent sudden fits of weeping, and you will remember that swinging motion and dragging of the right lower limb in walking, etc.

The skin had a congested appearance, but its secretion was not abnormal, the temperature of the right hand somewhat lower than the left, pulse, when examined was 104 and feeble, appetite good, bowels and menses regular. Evening temperature, 100.8° F.

We had here evidently a general paralysis, and there was wanting, indeed, only the peculiar form of delusions of greatness, wealth or power, to enable us to say there was a clear case of the General Paralysis of the Insane. But although the mind was weak and confused, with the marked emotional excitement which you noticed, I could discover no such delusions as ordinarily occur in this form of disease.

Dr. Wilkes, of London, however, says, that cases of this same general paralysis with similar pathological changes may occur without delusions of personal importance, or any other marked mental symptoms. Delusions of this kind may yet supervene, and I shall be much interested in following up the history of the case, as I hope to do.

Although the organs of speech, including the tongue, are affected so that articulation is difficult and indistinct, yet contrary to what usually occurs the tongue is protruded without particular difficulty and it is not especially tremulous.

In the general paralysis of the insane the pathological condition is said to be parenchymatous inflammation of the gray cellular matter of the hemispheres, or at least a cloudy swelling of the minute elements, hyperæmia of these tissues and lesions of the minute vessels, increase of the connective tissue, and finally a slow destruction of the brain cells, and a complete prostration of all functions, mental and physical, followed by death.

While I am not prepared to say that this is identical with that disease, it seems to me to resemble it so strikingly that I anticipate a similar course, and the same ultimate result.

The few cases of this form of disease which have not progressed pretty steadily and terminated fatally, are said to have improved under tonics—iron, quinine, etc., and cod liver oil—and I ordered for this patient the Elixir of Phosphate of Iron, Quinine and Strychnine, a drachm three times a day, with a scruple of Bromide of Potassium at bed time.

There seems to have been a slight improvement, though of course not material change since the treatment was commenced.

Case eleventh, P. O., age 24, from an adjoining county, blacksmith, single. Health good until four years ago, when before complete recovery from a very severe attack of measles, he was taken with paralysis of the left side, the upper extremity being affected more than the lower. Complicating this state he reported that he had spasms occurring once in from two to six

weeks. He said he was conscious until towards the last of the convulsions, when he sometimes loses his consciousness. He said he "frothed at the mouth" occasionally and had pain in the head and region of the heart after these spasms, he did not sleep well, had much loss of power still in the muscles of the left arm. Pulse 80, tongue slightly coated, bowels constipated unless taking medicine, urine normal.

As this patient presented himself on a day when a clinic was not held, but few of the class saw him, and only this history was obtained, he promising to come again for a more complete examination and advice, and I have referred to the case at this time merely for the purpose of giving an additional illustration of the varieties of paralysis that are met with, and the complications that occur, reserving a more full consideration of the case until the patient appears at the clinic before you all.

In examining the *Medical and Surgical Memoirs* by Dr. Joseph Jones, of New Orleans, a work of original investigations by that laborious and distinguished gentleman, just published, I find an account of cases of paralysis resembling in several respects case eighth, and in some respects case ninth. Dr. Jones' patients had been exposed to wet—two of them working in water to the knees—and also to malaria, the loss of power commencing in particular parts and becoming general proceeded to a fatal termination in the course of some eight or ten months, and *post mortem* examinations discovered some well marked lesions. The gray matter of the brain and spinal cord was of a deep reddish-gray color; the vessels of the inner membranes congested; the arachnoid of the medulla oblongata and spinal cord discolored as if washed over with a solution of Nitrate of Silver, the discoloration found to be from crystals of haematin; the spinal cord somewhat atrophied; the white matter firmer than usual and the gray softened.

Microscopic examinations showed a disappearance to a large extent of ganglionic cells—others degenerated—"filled with granular matter."

These patients were treated with tonics—Iron, Quinine and Strychnine, but apparently without benefit.

From the number of cases of loss of muscular power which have presented themselves at the clinic in so short a time, you might infer it was a very frequent disease, and indeed cases are not very unfrequently met with in ordinary practice; but you must bear in mind the large population from which our clinical patients are derived. The population of the State of Michigan is at least equal to that of the city of New York, and cases of interest—those difficult of diagnosis and treatment, come to us from all parts of this, and from various portions of the adjoining States; and while the cases coming to public institutions in New York are divided up among a score or more of hospitals and schools, we have this field very largely to ourselves; and you can bear witness that as many cases come under your observation as with the present arrangement of work you have time to study and profit by. In our next announcement we shall strongly advise students to come to the College early in their course of study, and remain three sessions instead of two—to give almost exclusive attention, the first year so far as study is concerned, to the elementary branches of Chemistry, Anatomy, Physiology and *Materia Medica*; the second year to carefully review these, while attending also thoroughly to the practical branches of Pathology and Practice of Medicine, Surgery and Obstetrics; and at the end of this second year to take their final examination in the first-named elementary branches, without regard to time of study, leaving them free from these the third year, so that they can give their time more exclusively to a thorough review of the practical branches and to the more thorough study of clinical cases coming to the amphitheatre, and those in the hospital. And to encourage this course of study, combining the advantages of a graded or successive course, with the necessary repetitions and reviews, it is proposed to afford the students selecting this improved course

extra advantages during their third year in thorough bedside drilling in the new State Hospital. While others are at their necessary work in the Anatomical, Physiological and Chemical laboratories, these can give their time in sections to thorough clinical work with their teachers in the *clinical laboratory*—the hospital. As the fees of the University are so small, and as students can live here as cheaply as at any other place, it is hoped that large numbers will avail themselves of this improved course.

The time having been so fully occupied by the account of these new cases of paralysis, I shall be forced to defer the promised remarks on the therapeutical principles in those cases to another lecture.

A CASE OF RETROGRADE INVAGINATION. Treated by W. B. MOTT, M. D., Baldwin, Mich.—Reported by FRED. B. WOOD, M. D., Big Rapids, Mich., Consulting Physician.

I was called on the afternoon of February 19th, 1876, to visit Mrs. W., of Baldwin City, in consultation with my esteemed friend, Dr. Mott. The patient I found to be a lady of about twenty-five years of age, and up to her last illness, had been in the enjoyment of good health, with the exception of some of the derangements of the system incident to pregnancy which was advanced to the fifth month. The history of the case as given me by the attending physician up to the time of my visit, was as follows: On Tuesday, the 8th inst., Mrs. W.—~~had~~ did a large washing and several times during the day lifted very heavily; was taken about 8 P. M. with severe pains in the abdominal regions, with some nausea and vomiting, but these symptoms caused no alarm; therefore medical aid was not summoned until the following day, when she was visited by Dr. Mott who, thinking that the trouble was caused by overwork, gave her moderate doses of sulphate of morphia, with the hope of quieting the pains and also of relieving the irritated stomach; in this he succeeded so long as the remedy was producing its effect,

but as soon as that wore off, the symptoms would return. Thus the case went on until the 12th or 13th, when the symptoms all became aggravated, the pulse became accelerated, the skin dry and hot, the abdomen quite tympanitic with but little or no tenderness.

About this time Dr. Dundass, of Ludington, was called to see the patient, but after a consultation with Dr. Mott, no definite conclusions were arrived at in regard to a diagnosis, yet they suspected what the trouble might be.

The treatment ordered was opiates, tonics and copious injections, as there had been no evacuation from the bowels since the attack. This course of treatment was continued up to the 19th at 10 P. M., when I saw the patient. I found her symptoms as follows: pulse 120, skin hot and dry, features pinched and anxious, tongue dry, red and somewhat contracted, abdomen very tympanitic, with considerable tenderness, but not circumscribed; neither was the pain located in any particular part, but general over the entire abdomen. When fully roused she would talk quite rationally, but otherwise was delirious and wandering, and on this, the eleventh day of her sickness, I could find but one well marked symptom of invagination; that was the vomiting of fecal matter, which was almost constant, it being mixed with food and fluids taken into the stomach, and had it not been for this one symptom, I should certainly have called it a case of Typhoid fever. But of one thing I was satisfied; that let the disease be what it might, the patient could live but a few hours at most, and this being Saturday, I was compelled to remain in the place until the following Monday, therefore I had an opportunity to watch the case until its fatal termination, which occurred on the 20th at 9 P. M.

A *post mortem* examination held three hours after death settled all doubt in regard to the diagnosis. In cutting through the abdominal walls I found the lower bowels very much distended with gases, while the stomach and upper portions of the intestines were filled with fluids and fecal matter. In tracing the in-

testinal tube from below upwards, I found the lower portion of the ileum invaginated, it being forced from below upward, and taking with it the ileo-cæcal valve and the cæcum. I removed the specimen for preservation, and found on actual measurement $6\frac{3}{4}$ inches of the gut included in the invaginated portion, the intestine being very much inflamed, and some portions of it in almost a gangrenous condition, with strong adhesions formed around the point of entrance, but no sloughing had taken place.

Now, the main and most interesting features of this case to me were, first, the absence of the main diagnostic symptoms, namely : The non-existence, at any time, of circumscribed pain or tenderness, it being diffused over the entire abdomen ; second, the retrograde course of the invaginated portion of intestine, also the length of the gut involved, and third, the length of time between the attack and vomiting of fecal matter.

*A CASE OF COMPLETE LACERATION OF ONE KIDNEY—
AUTOPSY. By W. H. BILLS, M. D., Allegan, Mich. With a note
by DONALD MCLEAN, M. D., Prof. of Surgery, University of Michigan.*

A. B., aged 28, drug clerk, has been somewhat intemperate for about six years. Fell on Christmas Eve. from the sidewalk, striking his left side just over the floating ribs, against a plank that crossed the gutter. He got up, and with a man to help him, walked about thirty rods, and up a flight of stairs to the room of a friend. I saw him about half an hour after the injury. He was suffering very severe pain in the left side, over the region of the kidneys, and had been vomiting. The skin was not broken, and there was no external sign of severe injury. In a few moments after I was called, he passed from the bladder over a quart of blood ; he also passed some blood from the bowels. He sank from loss of blood and shock until about noon, Christmas, when the hemorrhage seemed to stop, and a slight reaction came on, which lasted until the next morning, when he began to fail again, and died in the afternoon, having lived after the injury about forty-three hours.

Autopsy held sixteen hours after death. Slight discoloration of skin over the floating ribs on left side. The peritoneal covering of the intestine in the region of the left kidney was engorged, but the intestines were not ruptured. All of the internal organs seemed to be in a normal condition, except the left kidney—this was surrounded by a large clot of blood, lying behind the peritoneum, which was pushed forward, but not ruptured.

This large clot and the kidney were removed from the body together, and washing away the clot, it was found that the kidney was completely torn in two near the middle, and the fragments were separated more than an inch, the interspace being filled with clotted blood. There were no bones broken, and none of the spinal muscles were ruptured. The ureter was not broken, and the bladder was empty. There seemed to be no excretion of urine after the injury.

NOTE.—BY PROF. MACLEAN.—The specimen above referred to, was kindly forwarded to me, along with the history of the case, by Dr. Bills.

The most minute dissection and examination of the ruptured kidney which I have been able to make, has failed to demonstrate any evidence of pre-existing disease of the organ, and still it is quite possible that there may have been a state of engorgement or even degeneration, which if present would help to account for the complete severance of the kidney at the time of the injury. The violent contusion and the extensive infiltration prevented a satisfactory solution of this point.

Reflection on this case, so clearly described by Dr. Bills, can hardly fail to suggest the idea of *excision of the kidney as a remedial measure*. There can be no doubt that many far less promising and less justifiable operations have been performed than this would have been in the case here recorded. Mr. Annandale, of Edinburgh, has published at least one case in which he resorted to this operation for disease of the gland, but with a fatal issue.

The following case, however, taken from the *London Medical Times and Gazette*, of December 18th, 1875, has every appear-

ance of being authentic, and if so it is certainly sufficient to prove that the idea of excision of the kidney for injury is not utterly *utopian*.

"Removal of a wounded kidney.—M. Marvand, surgeon major in an Algerian regiment, relates (Rev. de Med. Militaire, Oct 6th) the case of a young Arab woman who had been severely wounded in the right lumbar region by means of a long knife *yataghan*, the instrument cutting only on one edge, had a thick back, and on withdrawing it, the right kidney was also drawn out of the wound, between the lips of which it remained strangulated.

There was considerable hemorrhage, but this soon stopped. A silk ligature was passed round the pedicle of the extruded organ, and at the end of some weeks the kidney was separated—the patient continuing in good health the whole time and the secretion of urine being normal.

She was discharged perfectly well two months after admission."

Correspondence.

UNIVERSITY OF MICHIGAN, }
MARCH 1ST, 1876. }

EDITOR PENINSULAR JOURNAL OF MEDICINE.—Sir—Notwithstanding the discussion on "hydrocele" in late numbers of the journal was evidently commenced in *pure captiousness*, it seems a pity that it should be permitted to terminate in *blank pointlessness*.

In the hope of avoiding this catastrophe I would suggest to Dr. Z. H. Evans that he might kindly favor us with a few facts; to-wit: 1st. How many cases has he treated *successfully* by the method he advocates?

2d. Who are the "many surgeons" by whose testimony the Dr. claims to be sustained?

Lastly. Where has their testimony been recorded?

I am, etc.,

DONALD MACLEAN.

FLINT, March, 1st, 1876.

EDITOR PENINSULAR JOURNAL OF MEDICINE.—*Dear Sir.*—I have the honor to report a case of “triplets,” born on Sunday evening, February 27th. The members of the group are all girls, and had, at birth a combined weight of seventeen pounds. There was nothing of peculiar importance connected with the birth, further than the infrequency of such occurrences, and the fact that the children are all at this date doing well, and present every appearance of probable survival. The first member of the trio presented in the first position, the second was a footling, and the third a breach presentation.

They are the children of Mr. and Mrs. Elias S. Baker, of this city, and the parents are rather elated over their good (?) fortune, and interpose no objection to its publication.

Yours truly,

A. B. CHAPIN.

*STUDENTS' RESOLUTIONS ON THE HOMEOPATHY COM-
PLICATIONS.*

WHEREAS, At the commencement of this session now drawing to a close, serious fears were entertained by many members of this class that the peculiar, and to most of us before unknown, relations of this Department of Medicine and Surgery to the Homœopathic College would injuriously affect our interests as students of the department; and

WHEREAS, Our alarm was at first excited and afterwards aggravated by statements, arguments and insinuations published and circulated among us by unscrupulous and designing persons, and

WHEREAS, By the advice and encouragement of the Medical Faculty we were induced to disregard those influences and to remain here, notwithstanding those ominous warnings; and

WHEREAS, We have had all the facts and circumstances of the so-called homœopathic complications fully explained to us and

have been able to corroborate the statements of the Faculty by a reference to the official records of the department, therefore we, as students, desire before dispersing to our several homes to give expression to our honest convictions in the matter; therefore

Resolved, That we have no reason to regret the determination unanimously adopted by us after the explanation furnished us in the early part of the session by the Faculty to remain here and avail ourselves of the universally acknowledged high advantages of this Medical School.

Resolved, That we have carefully considered and investigated the charges and insinuations which have been so freely urged against our Faculty in connection with the homœopathic complications, and we are fully convinced that they are utterly devoid of foundation in fact.

Resolved, That in our opinion a great deal of the censure which has been expressed toward our teachers in this matter is the result, not so much of a hatred of Homœopathy, (a sentiment which no man or body of men could entertain more strongly than they do), as of a strong desire from interested or other motives to injure and if possible destroy this Medical School by depriving it of the confidence and esteem which it has always enjoyed from the profession at large.

Resolved, That we, the students of the Department of Medicine and Surgery have now, as ever, the utmost confidence in the integrity and wisdom of the Faculty as our teachers and the guardians of all our interests as students and prospective alumni of this University.

Resolved, That we cordially sympathize with the Faculty in the hopes which they now entertain of obtaining from the State Medical Society at its approaching meeting such advice and countenance as may result in the adoption of wise measures for the final disposal of this, the only obstacle to the prosperity and usefulness of our Alma Mater.

Resolved, That a copy of these resolutions be presented to the

Faculty and one to each of the Detroit medical journals with the request that they be published.

E. W. YOUNG,
T. J. FORHAN,
HENRY B. HATCH,
C. L. DE VINNY,
J. D. STOCKING,
Committee.

ANOTHER WORD ON HOMOEOPATHY.

Editor Peninsular Journal of Medicine.

From the amount of literature on the subject it would seem that the Homœopathic question is one of great moment to the profession, and no doubt it is. But before forming an opinion, it is but natural for the readers of all that has been published, to inquire into the motives of those who write upon this much contested subject. Are their motives purely scientific and is their aim purely the advancement of regular medicine and the good of that great institution of which we, as citizens of Michigan, are justly proud, our State University? The fact that the criticisms come from the source they do, the profession, would lead us to answer the question in the affirmative, but after a little inquiry into the relations of those who write, to the subject on which they seek to edify the balance of the profession, we may add a very significant "perhaps." One very suspicious circumstance in the discussion now going on, is the fact that it is led by a journal which is edited by a professor in a rival college, and the only rival college in our State. It is not in the natural order of things that rivals should be sticklers for each other's good; the world, it is to be feared, has not yet approached so near the millennium, and very naturally we are a little suspicious at this day, when we see such evidences of that wished for time.

What would be the effect of the state of feeling on the Homœopathic question which the disinterested (?) *friends* of the University are seeking to engender among the profession? The American Medical Association would repudiate the Medical

Department and would refuse to recognize its graduates. The consequence of this would be the disorganization of that department or its passage into the hands of the Homœopaths, and the distribution of the 350 medical students who annually attend the University, among the rival schools of the country. It becomes the profession of Michigan, both as individuals and as a State Society, to cut themselves loose from any influence an interested few, who seek to bring about such a deplorable state of affairs, may have exerted, and with its own interests, which are so clearly interwoven with those of our noble University, at heart, to view the question in all its bearings before giving a verdict which they may afterwards regret. Will the profession unguardedly suffer themselves to be made the cats' paws of individuals smarting under real or imaginary wrongs, or those who seek to aggrandize themselves at the cost of our State University? These are questions, I say, well worth the consideration of the practitioners of medicine throughout the State.

It is a wholesome sign that the homœopaths are dissatisfied with the arrangements at Ann Arbor. They have commenced to realize the difficulties under which they must labor in building up Homœopathy under the auspices of the State. They can see, if we cannot, that the arrangement is a bad one for them. They know that to teach their system alongside of regular medicine simply means death to *similia similibus curantur*. They also know that where students have their choice between a regular diploma and a homœopathic one, they will, with very few exceptions, choose the former. Their own common sense (of which I would not hold them entirely destitute) teaches them this, while the workings of the Canada medical act confirm it.

If the regular profession, therefore, were quietly to let this matter alone, it would take care of itself; if, however, they determine to follow the wake of an unscrupulous few, the result must inevitably be what, certain at least among that few most devoutly pray for, viz: The disruption of the Medical Department to the building up of a rival.

No one can deny the right of the people to have taught in an

institution supported at their expense, whatsoever they may deem fit. The University is their school, and it is their privilege to have taught there Homœopathy, clairvoyancy, mind-reading, or anything else they pay for.

True medicine can no longer stand aloof from false systems and humbugs which the people tolerate and even encourage. That mode of dealing with them has been tried too long and has added to their prosperity. The people look upon their supporters as persecuted scientists, and with an innate regard for fair play, are determined to let them have a chance. The very thing the homœopaths do not want is what they have so long clamored for, and have at last got in the University, and now that an opportunity has been afforded true medicine let it "fight it out on that line" and vanquish or be vanquished by what they can no longer treat with a silent contempt, but must dignify with the name of an enemy. As Professor Palmer has truly remarked in his statement, "No form of error or deception was ever put down by senseless denunciation without investigation and exposure." Ministers of the gospel do not attempt to put down the sin and iniquity which abound, by standing back and sneering at and denouncing sinners without attempting to teach them better. Such a policy we would consider ridiculous in anything but medicine.

Then, if the profession of the State really have the good of regular medicine at heart, and wish to advance true science, let it no longer attack the University and its professors who have nobly taken their stand in this matter, but attack the enemy in a common sense way; "a house divided against itself cannot stand."

The fact that the people, through the Legislature, have forced Homœopathy into the University is, perhaps, a lamentable one, but it is there, and shall we give up the school into their possession now that the enemy have commenced boarding the scientific ship? Shall we surrender and leave it in their hands? Rather let us meet them and conquer or be conquered. If scientific medicine cannot stand face to face with the humbug

Homœopathy, then it is better it should perish and give the more energetic enemy the field.

O. E. HERRICK.

GREENVILLE, February 22.

HOMœOPATHY IN THE UNIVERSITY.

EDITOR PENINSULAR JOURNAL.—In response to your kind invitation in the February number of the JOURNAL, we beg leave to submit a few reflections which have been called forth by reading the recent article from our esteemed friend and former teacher, Prof. Palmer, a friend to whom we have felt free to go in every need, and whose uniform kindness has been spread around us like an atmosphere in which it is pleasant to live; the remembrance of which fills us with heartfelt gratitude, and whatever we may say will be said in kindness to one to whom we are so much indebted. The inside history of this homœopathic embroilment we will leave for others, and as regards his own personal history, knowing nothing to the contrary, we give credence to what is said.

On page 138, February issue of THE JOURNAL, in answer to Dr. Sager's letter informing him of the action of the Board of Regents, he says :

“ I answered the letter deprecating the arrangement in the strongest terms, expressing my surprise and chagrin.” In a letter to the president he wrote as follows : “ Expressing at still greater length, my surprise, my objections and regrets ; ” on page 139 it says : “ The members of the Faculty of Medicine and Surgery, while maintaining their positions as public servants, are bound by the authorities and laws which are above them. Their only means of escaping from what this authority decides is by resignation. Should anything be demanded of them, which they regarded inconsistent with their honor or duty to the profession, they would doubtless resort to this alternative.” It says further : “ No such demand has in their estimation been made.”

Is that so? If so, then why deprecate? Why express surprise and chagrin?

That gem of a teacher, Prof. Ford, in *Review* of February, says he never failed "to do what he could to prevent it," but uniformly deprecated such a result; he further says it was an "act which every member of the Faculty deplored." Why deplore it? Especially in view of the question asked by that foster father, that "friend of homœopathy in the University." "What is all this fuss about?" And in view that the Faculty have so long "stood the brunt of the opposition" in the past; in view of the fact that some consider that there has been a great error committed in "keeping so far aloof from this system," and in view of the fact that homœopathy "has created for itself a demand among the people." In view of these several considerations, what mean all their lugubrious phrases, while they are so actively engaged in their "labor of love?" So actively engaged in their "work of duty," so assiduously pursuing "these paths," which "are the paths of glory," breaking the way for future generations?

If the position of the Faculty is as depicted, how knew Prof. Palmer "of the excitement which its establishment at the seat of the University would produce, of the occasion it would give for rival schools to excite opposition to us, of the mortification which would follow to our alumni and our friends, of the disturbance of our peace, of the probable withholding of support and patronage on the part of some?" How knew Prof. Palmer all this? Have the alumni ever proven themselves indifferent to the welfare of the school? Have they ever been lacking in support of its Faculty? Does he think they are so suddenly bereft of reason, as to be alienated from the Faculty when nothing is "demanded of them," "inconsistent with their honor or duty to the profession?" In the further view given us by the venerable head of the University, in reference to what he calls, this "interesting experiment in medical education," in "which it is believed that reasonable

men of both schools of medicine will agree, that this is a judicious method of carrying the law of the State into effect," we must consider such regrets and deprecations as hardly called for, when a professor of medicine is occupying a position where nothing is required of him or his colleagues, inconsistent with their honor or their duty to the profession.

On the contrary, if this is their position, then are they in duty bound to honor, aid, and assist, and do all they can to make successful so interesting an experiment, which has been inaugurated by the powers which are higher than they. And if it is the duty of the Faculty to be interested in, and to aid and assist in this undertaking, then the same duty devolves upon every physician in the State, and if in the State, then every physician in the country should grant it a hearty welcome. Will Prof. Palmer abide these deductions of his own statement? What a grist is this, to dump down before the physicians of our State and country, the acceptance of which involves so great a "new departure" in medical ethics.

We quote the next sentence, "and to abandon their position in the absence of such demand would be without justifiable cause to turn the University over to the unopposed promulgation of a system of absurdity and folly."

Will the Professor tell us that he is opposing anything, the authorities of the University have established?

Will he say that any of his colleagues are doing so? Will he aver that that is the object of his remaining?

On the contrary, we allege that he is not doing it; that he dare not do it; that he cannot do it and occupy the position he does. He may teach theory and practice of medicine to regular students, while his colleagues are teaching both regular and homœopathic students their several branches; but this is not opposing anything the authorities have established. On the contrary, whatever of reputation his colleagues may have achieved as teachers, whatever may be the resources of the old school, and its facilities for imparting instruction; all these are heralded

by the friends of homœopathy all over the country as inducements for homœopathic students to attend that school, and in the very nature of things the Professors in the old school are made aiders and abettors, as the resolution of the Board of Regents designed they should be, in what they profess to deplore, and for all they can or dare do, the University is now, "turned over to the unopposed promulgation of a system of absurdity and folly," aided and assisted by whatever of prestige and renown the old school may have acquired, by the assiduous labors of its Faculty and friends.

But says the defense of the Faculty statement, the most serious charge of misrepresentation is in regard to the following: "The Faculty of the College of Medicine and Surgery does not recommend for graduation, and has no responsibility whatever in sending forth or licensing to practice homœopathic students, or testifying to their fitness to become members of the medical profession."

"This too is simply true." We say yes, this is true, after a fashion, and after a fashion it is not true.

The Professor further says: "The Medical Faculty *does not recommend them for graduation.*" That is so, while the old Faculty are playing the role of teachers of students of regular medicine, they do not recommend homœopaths for graduation, and we are not aware that any one has ever claimed that they did, and if the claim has ever been put forth, it has escaped our notice. It is admitted that homœopathic students are taught by the old Faculty and certificates given, "and no attempt is made to deny any responsibility which such teaching involves." What are the responsibilities which obtain in teaching a regular student anatomy, that does not obtain in teaching a homœopath the same. The responsibility is just the same in one case as the other, the same kind of certificates are given in both cases. The certificates are just as valuable in the one case as in the other, as credentials to be presented in the one case to the Dean of the old school, in the other to the Dean of the Homœopathic College, and in

neither case does the Professor recommend the student as fit to practice medicine. There is a somewhat harsh but still expressive maxim that obtains among lawyers, of which we have often been reminded in reading certain portions of the Faculty statement, the maxim is, "a part of the truth is equal to a whole lie," and if we should quote a certain maxim which obtains in medicine, it would be in these words: "Nine Medical truths are equal to a whole lie," but so delicate a subject as this, we will leave for the reader to dispose of as he may think best, and we will resume our subject.

Great stress is laid upon the fact that the Dean of the Homœopathic Faculty recommends the homœopathic students. Why! we knew that, and supposed every body else knew it. But, in whose behalf does he present his recommend? He certainly cannot do it on his own responsibility. In whose behalf does the Dean of the Faculty of Medicine and Surgery recommend students in regular medicine? Certainly not on his own responsibility, but in behalf of the teaching Faculty of the regular students, whose mouth piece he simply is, and whose certificates form the basis of his recommend. The Dean of the Homœopathic Faculty bases his recommend upon the certificates furnished him by the teaching Faculty of the homœopathic students. Who are the teaching Faculty of the homœopathic students? Two homœopathic Professors proper, who lead the gang, in this "unopposed promulgation of a system of absurdity and folly," and every member of the old Faculty who teaches homœopathic students, and furnishes them with certificates of proficiency, and as we understand it, it embraces every Professor in the old college save the Dean himself, and when these certificates are placed in the hands of the homœopathic Dean it is known and understood that through him they are to reach the Board of Regents in the shape of recommends; and whatever he does in recommending is always done *in behalf of the Faculty* that has given the student instructions and furnished him with certificates of proficiency. As we have already said, the Professors in the old college as teachers of students in regular medicine, do

not recommend homœopathic students for graduation, but as adjunct Professors in homœopathy, as constituting a part of the teaching Faculty, for homœopathic students *they do so recommend them*, and without their recommend this thing called a homœopathic college, this thing of twenty years trituration, which it is claimed is as distinct from the Medical department as is the law department from the department of sciences and arts, which the burlesque "whereas" of the Board of Regents, would lead one to suppose was to be a branch or department of the University, could not graduate a student in a geological age.

Without the aid of the old college it cannot perform one function, such as ordinarily belongs to an organization called a college—save the registration and matriculation of its students, and every one of these adjunct Professors are just as much responsible for sending out homœopathic students, armed with the credentials of the University as they are for so sending out students in regular medicine, and they recommend the one just as much as they recommend the other.

Prof. Palmer's certificate of proficiency in theory and practice unaided, is not a recommend for graduation, and is not necessarily an intimation that the student is not qualified to practice medicine; put Prof. Ford with him, and they two cannot recommend but a certain number of certificates to amount to a recommend, and when a student is recommended, it is the work of the Faculty; when a homœopathic student is recommended it is done by virtue of the certificates of the homœopathic professors proper, and the adjuncts who are in the old Faculty. It is true the term adjunct, has not that we aware, thus far obtained, but we claim the term is a proper one; and we think the Faculty statement is eminent for the things it does not state, as well as the resolutions of the Board of Regents for the things it does not resolve.

On page four, of the Faculty statement (pamphlet form), it says: "This homœopathic college created under an act of the Legislature, essentially different from any acts in regard to

homœopathy previously passed, which the Faculty had so strenuously opposed, and the Regents had so constantly declined to carry into effect, is entirely different in its organization and name from the department of Medicine and Surgery." So far as this Legislative act is concerned, it is essentially different from any previous acts passed. The law of '73 says they *shall* appoint two Professors of homœopathy in the department of Medicine. The law of '75 simply authorizes the Board of Regents to establish a Homœopathic Medical College as a branch or department of the University, to be located at Ann Arbor. It does not say they *shall* appoint two Professors of homœopathy in the Medical department. It is claimed from high authority that this department is as "distinct from the department of Medicine and Surgery as is the department of science and art, from the department of law," but it is not claimed that the school of dentistry is independent of the department of medicine and surgery, and we aver, that if the same words which are used in establishing the Dental College, had been used in establishing the Homœopathic College changing only the words College of Dental Surgery, to that of Homœopathic Medical College, and changing the title of its professors, the Homœopathic Medical College would sustain precisely the same relations to the Medical department it does now. We quote the resolution establishing the College of Dental Surgery :

"*Resolved*, That a College of Dental Surgery be established which *shall, in addition to the facilities now afforded by the Medical Department and Chemical Laboratory*, be constituted by the founding of two professorships."

What more or less has been done in the establishment of the Homœopathic Medical College except the senseless claim set up for it, that it is a distinct branch or department of the University, entirely distinct and independent in its organization from the Medical Department. What are these facilities afforded by

the Medical Department and Chemical Laboratory to the College of Dental Surgery ; except professors already appointed, and a well supplied college and chemical laboratory, whereby the student in dentistry is enabled to successfully complete his curriculum of studies ? What more or less are the *facilities* or *privileges*, just which you please, that are afforded by the Medical Department and Chemical Laboratory to the Homœopathic Medical College, than professors already appointed, a well supplied college and chemical laboratory whereby the student in homœopathy is enabled to successfully complete his curriculum of studies ? Although the law of '75 is, so far as it appears on the statute books, less objectionable than previous acts of the Legislature ; yet have the botch resolutions of the Board of Regents so made it effective, that, essentially the obnoxious features of past legislation are revived in this. The act of '75 does authorize the Board of Regents to establish a Homœopathic Medical College as a branch or department of the University, and in reading it as it appears on the statute book one would naturally think that the effort to make the old school subservient to the interests of homœopathy had been given up by the Legislature, and for one, we do confess that we fancied we saw peace and quiet for the physicians of our State, and also peace and quiet, and a still unsullied record for our cherished school at Ann Arbor. But the resolutions of the Board of Regents soon spread their dismal pall like endless night over the dawn of hope, and as we continue to read these resolutions in the light of such special pleading, and palliative phrases as these, " no homœopathic professors, as previous acts provided for, are placed in medical department, but a separate college established,—faculties never meet in joint sessions—lectures given in separate buildings—diplomas granted different in character—curriculum of Medical department not changed—no students in Medical department taught homœopathy." We say, when we read these resolutions

in the light of such phrases, we are reminded of what Dr. Hitchcock, at the State Society said in referring to this same muddle, and with the apparent agony of a soul in travail, when he arose from his seat and exclaimed, "Who shall deliver the university from the body of this death, that is being fastened upon it." And when we further read these resolutions, in the light of the assertions that have been made, that the only object of the law of '75 was to enable the Board of Regents to put in effect the law of '73; and when we read that this was understood by the Regents, and that that "friend of homœopathy in the university," had written a letter congratulating homœopaths upon their wisdom and political tact, in not urging too much upon the legislature; then are we obliged to conclude that some one has been plowing with some other one's heifer, else they had not so soon have found out this riddle. We can plainly see that this nefarious work in which the Faculty and Board of Regents are engaged, if it is to be successful, involves an entire change in the professional sentiment of the state and country. We consider that they have already joined teams in this dubious effort. If their plowshear is sufficiently strong, and is driven with sufficient force, they will succeed, if not, they will fail. We have no uncertainty as to the result; no such so-called reasons as they have thrown before the physicians of this state can permanently mislead them. They may by virtue of false impressions and imperfect understandings, get a sort of endorsement from medical societies in different parts of the state; physicians here and there may be cajoled into the acquiescence of the scheme, but it cannot permanently succeed. Defeat is written all over it, and the odor of professional purity is already removed far from it. Every effort the Faculty make to justify themselves shows their professional obliquity in a more glaring light. No gasconade about "the bloody shirt of professional inquisition," can dignify either the

Faculty or the Board of Regents into the positions of martyrs or convince any one they have not "got their foot in it," neither will it divert the attention of an outraged profession from what has been done. Ere long the state society will again convene. Should that body re-enact even the negative endorsement of the Faculty it did last year, we shall query how it will dispose of the next case of labor, that may be brought before it of members of the society, who may have, during the year, consulted with homœopathic physicians. We shall query, whether any one will ever again have the temerity (should an endorsement of the Faculty obtain) to ever present again, a case of delinquency of this kind, and whether the society, under such circumstances, will ever seriously entertain such a charge, which would more comport with the position and standing of a band of idiots let out for noon, than the serious deliberations of a medical society. If we remember aright, a case of this kind was presented before the society last year, which was disposed of by referring it back to the society of which the alleged delinquent was a member.

It may be that this case was the last expiring effort of what every consistent supporter of the Faculty must needs wish, shall as soon as possible become an absolute custom. For surely to keep alive such a custom must need retard the full dawn of that day, when "we shall tolerate every qualified person—whether orthodox or heterodox," or any other dox, in the enjoyment of all the benefits which they may derive from a study of all the branches taught in our great University," and more especially those branches in which that distinguished, or at least very vehement, author of our last quotation, is so zealously if not wisely engaged in thrusting upon the profession of the state. If the Faculty propose to submit to be used as entering wedges to disrupt the ethics of our profession, they must expect to receive the amount of pommelling that usually falls to the lot of such instruments. Every Professor in every State Medical School should know that what has befallen the School at Ann Arbor is liable to overtake every State School in the country. Every Professor who

lends himself to such a scheme as has been inaugurated with us, should realize that until every dissenting voice is whipped into submission, until every remonstrance is cowed into silence, he must needs sleep with his armor on. Every such Professor should realize that "these paths of glory" are liable to be rugged ones, and that the boasted glory is liable to be highly problematical, and if, perchance obtained, is still more liable to prove in its profession like the purple lock which Scylla cut from the head of Nisus. We long for the time to come when we can sustain our old Faculty through every conflict; when we can rally to their support without being recreant to the profession at large; but, while bending themselves to their present task, we must say to our soul, "in their councils be thou not united."

Respectfully,
E. TWISS.

UNION CITY, March 9th, 1876.

EDITOR PENINSULAR JOURNAL OF MEDICINE.—I have wanted to have my say on this absorbing muddle, but have hesitated to do so from the fact that I did not wish to occupy space which might be much more profitably taken up. While I have hesitated, however, others less delicate on this point, have stepped down into the pool before me and have been cured of their *cacoethes scribendi*.

Some unknown friend has kindly sent me a copy of the *Review* for March, with whose communications on the homœopathic question I have been both interested and pained. As you have justly remarked in your February No., this question is one of vital importance to the profession, and it certainly is one which admits of discussion, for like most other questions it has two sides. It strikes me very forcibly, however from a perusal of the *Review* sent me, that some of the gentlemen engaged in this discussion have taken a departure from the original question to indulge in some very unbecoming personalities.

I was brought up at the feet of some of the venerable heroes in this strife, and have since leaving the shadow of their presence delighted to regard them as men whom it would be safe to emulate. Imagine my surprise, therefore, and pain, at seeing the exhibition in the March number of the *Review*. Very fortunately, Mr. Editor, I am better qualified than yourself to express an opinion on the conduct of certain gentlemen, inasmuch as opinions are apparently valuable according to the age of those expressing them, as I have passed several "semi-decades of my professional existence." It is really an "atrocious crime to be a young man!" But the young man who first made this assertion said something in the same connection about gray hairs, which I would respectfully commend to some who have passed more "semi-decades of their professional existence" than either you or I. No weight of years or profusion of whitened locks to back it, can make personal abuse pass current as argument among gentlemen.

I had read the *PENINSULAR JOURNAL* for February and had seen there Professor Maclean's manly and and outspoken re-assertion of charges made by you against Dr. Sager, which that gentleman had denounced as "calumnious and unfounded." I looked in vain to find some further reference to the matter in the March *Review*. Surely Dr. Sager could not have forgotten in the bitterness of his invective, to have said something to relieve himself from the undesirable light Professor Maclean's short but pointed note has thrown upon him. Whether he forgot it or no, the question is now one of veracity, with Dr. Sager on the one side, and President Angell and Professors Chever and Maclean on the other. Who tells the truth?

It seems to me, Mr. Editor, that the "immitigable contempt" which we all conceive for homœopathy has too largely biased the views of the profession on the state of affairs at the University. We have before us an evil which twenty years of expe-

rience has taught us cannot be eradicated by any treatment conducted on the "immitigable contempt" basis. It must be grappled with, and it is the duty of the profession to aid in such disposition of it as shall work the least injury to true medicine. These delicate questions of ethics are of minor consideration at the present juncture. This is no time for hair splitting. Neither is it a time when we can afford to allow individuals smarting under either real or imaginary wrongs and deserved slights, or those who are swayed by nothing more than the narrowest self-interest, to modify our views. The facts are right before us and demand attention. Homœopathy has its two chairs in the University and the people, whose institution the University is, gave it them. The opponents of the existing plan, in harmony with the homœopaths themselves, do not object to the fact of the homœopaths having the chairs, but are not pleased because they have not six chairs instead of the two. Now grant them six chairs—a full corps—and what would be the result? If the existence of homeopathic practitioners is an evil, the evil would be aggravated with a rapidity which its warmest friends would welcome. At present the regular Faculty have it in their power to ensure the public, from graduates in homœopathy from the University, a proficiency in those branches, a proficiency in which is the deadliest enemy to both homœopathy and all other kinds of empiricism, to wit: Anatomy, Physiology and Chemistry. The honest man who is proficient in these fundamental branches cannot long sail under the homœopathic ensign. To give the homœopathic college, a full corps of Professors would be to remove the wholesome restraint which the regular Faculty now have it in their hands to exercise over them. No wonder the homœopaths are dissatisfied with the present plan. Nothing more inimical to their interests could well be conceived of.

I will not argue the ethical question involved in the existing plan; for even though the code were a little strained thereby,

(which I very much doubt) the great good derived makes the consideration of such trifles ridiculous.

Let the profession look at this matter in a practical, matter-of-fact sense. Let it rally to the support of the Faculty in this, their hour of tribulation, and see to it that it does not suffer itself to become blinded to its own interests, either by the specious reasonings of illnatured or disappointed men, or by the whimsical maunderings of hair-splitting technologists, and much less by the rhodomontade of a "misdriven bantling," whom it would be flattery to dignify by the name of rival, whose very existence depends on the disruption of the Medical Department of our noble University. I have faith in the profession of Michigan, and believe that at the approaching meeting of the State Society the decision will be to allow the barnacle, which has fastened itself to the old ship (to follow the nautical figure), to retain its hold until it looses it voluntarily, to sink into the great ocean of error, never more to trouble or worry with apprehension the noble craft, which has for so many "semi-decades" "braved the battle and the breeze."

ANOTHER ALUMNUS.

Ophthalmology and Otology.

GLAUCOMA. By A. G. SINCLAIR, M. D., Detroit. *Ophthalmic and Aural Surgeon to Harper Hospital; Member of the American Ophthalmological Society.* Read before the Wayne County Medical Society, November, 1875.

MR. PRESIDENT AND GENTLEMEN—I beg leave to ask your attention this evening to the subject of glaucoma—one of the most dangerous, but in its early stages, happily, at the present day, one of the most curable forms of ophthalmic disease. The name is derived from two greek words, *glaucos*, sea green, and

oma, a term which in medical phraseology signifies a pathological condition, a name which, although adapted to the disease as understood by the ancients, and even down to a comparatively recent period, is not at all expressive of its nature as understood at the present day. It arose from the presence of a single symptom of the affection, namely, a greenish discoloration which is observed in the pupil in many cases. This, however, is only seen in the advanced stages of the disease—a time when the recognition of the trouble may be of little value so far as vision is concerned, for it may then have passed beyond the reach of cure. To him who has carried his studies of this disease beyond what might be termed the pre-Graefian age of ophthalmology, the central idea which the term conveys is not that of a greenish discoloration of the pupil but of a condition in which the tension of the eyeball is abnormally increased, and attended by a peculiar form of cupping, or excavation, of the optic nerve. These are the essential elements of the disease, but it is attended by a chain of other symptoms which vary according to the type which it assumes. It is quite impossible, in a paper of ordinary length, to enter fully into the details of the whole class of affections which come under this head. I shall, therefore, limit myself to a consideration of the disorder in its more common forms.

The disease is divided into glaucoma simplex—a form in which it may begin, and run its entire course, without any evidence, whatever, of inflammation—and glaucoma cum ophthalmia—a variety which is always attended with inflammation, and according to the degree of which, it is subdivided into acute, sub-acute and chronic.

We shall first consider the symptoms of glaucoma simplex. This form of the disease usually occurs in persons beyond middle age, and they are frequently found to have suffered from gout or chronic rheumatism, and are sometimes the subjects of atheromatous degeneration of the arteries.

At this period of life the majority of persons are more or less presbyopic—a condition in which the diminution of accommo-

dative power arising from senile changes in the crystalline lens renders the use of convex glasses necessary for near vision. The earliest symptom of glaucoma is a relatively rapid increase of this condition, rendering it necessary for the patient to change his glasses at frequent intervals for others of greater power. This symptom, however, is less marked in this than in some other forms of the disease. There is little change in the exterior appearance of the eye. The transparency of the refractive media may be undiminished; the cornea sensitive; the anterior chamber of normal depth; the iris but slightly, if at all, discolored. The pupil may be somewhat dilated and respond but feebly to the stimulus of light.

Two signs, however, will indicate the true character of the disorder. First, if gentle pressure be made upon the eyeball with the finger it will be found to be abnormally hard and resisting. This will become more apparent on comparison with the tension of the fellow eye, or if that also be affected, for the two eyes often suffer at the same time, the surgeon may compare it with that of his own eyes. The other sign is a contraction of the field of vision. Various methods have been devised for detecting this, but the most convenient, though not the most accurate, is to place the patient at a distance of about eighteen inches from the examiner, who then directs him to look with the affected eye into his own eye of the corresponding side, that is to say, the patient's right eye into the surgeon's left and *vice versa*. The fellow eye of the patient is of course closed during the examination. If now the surgeon move his hand in various directions through the visual field he will readily ascertain the greatest distance from the optic axis in all directions at which it is still visible. In order to insure accuracy the number of fingers held up should be constantly changed and the patient required to count them. In this way it will be found that the field of vision is defective. In the great majority of cases this deficiency occurs on the nasal side, but in those which are very protracted it may exist uniformly in all directions. On submitting his direct vision to proper tests it will also be found more or less impaired.

These symptoms may all be recognized by any careful observer, and are sufficient to indicate the nature of the disease. But if to these we add the changes within the eye, as seen with the ophthalmoscope, there is no longer room for doubt. The optic nerve instead of having its normal elevation of about one fourth of a line above the adjacent portion of the retina is depressed beneath it. Its color is also lighter than in the normal state. If the excavation of the optic nerve be at all considerable, the retinal vessels appear interrupted as they pass over the edge of the disc. The veins are dilated and the arteries are seen to pulsate either spontaneously or upon making slight pressure on the eye ball.

So insidious is this form of the disease that, when but one eye is attacked and no inflammatory symptoms manifest themselves, it may run its entire course, ending in total destruction of sight, without the patient being conscious that his eye is at all affected. Fortunately, however, in the majority of cases, symptoms of inflammation occur which, though often slight, suffice to attract his attention to the condition of the affected organ, and induce him to call in assistance while relief is yet possible.

Permit me for a moment to dwell on this symptom of augmented tension. It is of so much importance in the pathology of the eye that various instruments have been constructed for the purpose of accurately measuring its degree. Unfortunately, however, they are of more service in the laboratory of the physiologist than in the office of the physician. No means of gaining this knowledge have yet been devised equal to that which nature has given us in the sense of feeling. Here, as in many other instances in the practice of medicine, the *tactus eruditus* proves far superior, as a means of diagnosis, to the most ingenious contrivances of man. In the normal condition the coats of the eye yield slightly to gentle pressure with the finger, but promptly resume their natural curvature when the force is removed. In glaucoma the tension of the eye ball is increased, sometimes to such a degree as to give to the finger a sensation as of almost stone-like hardness. To indicate the different degrees

of tension the following signs, originally suggested by Mr. Bowman, of London, in 1862, have been adopted, viz: the capital letter T to express tension; Tn, tension normal; the letter preceded by the sign +, tension increased; preceded by the sign —, tension diminished; with the numeral 1, 2 or 3 following the letter the respective degrees of tension either plus or minus, as the case may be, are indicated, number 3 expressing the third or extreme degree. These signs are useful but of course only approximatively correct. The cause of increased tension will be alluded to further on.

- *Inflammatory Glaucoma.*—In the inflammatory form of glaucoma we have the second type of the disease, and as already stated, this is divided into sub-varieties, according to the degree of inflammation present, this being acute, sub-acute or chronic.

In the acute form the symptoms are very striking—often, indeed, so severe that at the first view the attack may be mistaken for one of purulent conjunctivitis. A little attention to details, however, will save the attendant from this error. In the majority of cases, about 75 per cent. according to Soelberg Wells, there is a premonitory stage which may be recognized by the *periodic* occurrence of some, or all, of the following symptoms. When complete intermissions no longer occur the case has passed into the stage known as confirmed glaucoma.

1st. Increased tension of the eye ball, which, however, in this stage, never attains its maximum degree.

2d. Rapid increase of presbyopia. In this variety of the disease this symptom is often very marked, obliging the patient to resort at frequent intervals to the use of stronger and stronger glasses for near vision. This change is supposed to be due to the augmentation of the contents of the globe of the eye, which by pressure on the nerves supplying the ciliary muscle—the active agent of accommodation—produces a partial paralysis of the latter.

3d. Cloudiness of the aqueous and vitreous humors. The aqueous humor becomes hazy, changing more or less the color of the iris. The vitreous is similarly affected, rendering the de-

tails of the fundus of the eye indistinct, sometimes to such a degree that a satisfactory examination with the ophthalmoscope becomes impossible. This symptom may occur at intervals of a few hours, though often with less frequency. Its duration is also very variable.

4th. Dilatation and sluggishness of the pupil. These symptoms are less marked than in the later stages of the disease, but on comparison with the fellow eye the enlargement of the pupil becomes manifest; it also fails to react with usual promptness when exposed to the stimulus of light.

5th. Periodic obscuration of vision. During these attacks all objects appear hazy and indistinct; at times the dimness is very great and attended with more or less narrowing of the visual field. The duration of these attacks varies from a few minutes to several hours. They may arise from temporary cloudiness of the humors of the eye, but are usually due to a derangement in its circulation. Obscurations of any degree, from the faintest to the most dense, may be produced in the normal eye by making pressure upon it, and it has been shown by Donders that dimness of sight supervenes the instant pressure is carried to the point of producing pulsation of the retinal arteries. This experiment may be carried to such an extent that, as Soelberg Wells says, even the light of a bright lamp becomes quite invisible. Further evidence that the dimness is due to derangement of the circulation, is that the attacks are liable to follow whatever produces congestion of the ocular blood vessels, such as mental excitement, great exertion, a stooping posture, etc.

6th. A halo, or rainbow colors, around the flame of a candle. This symptom rarely fails to appear during the premonitory stage.

7th. Ciliary neuralgia. Though not always present in this stage it occurs in the majority of cases. The pain may be very severe, and extend to the corresponding side of the nose, forehead and the temple. It occurs at the same time with the obscurations of vision.

8th. The visual field may be somewhat limited, but this may not occur in the premonitory stage.

In some cases these symptoms are all so slight as to be scarcely appreciable; in others very severe. When the latter is the case, the anterior chamber is diminished in depth, and, if the refractive media be sufficiently transparent for ophthalmoscopic inspection, the retinal arteries will be seen to pulsate.

Early in the premonitory stage, months may intervene between the attacks. As the disease progresses, however, these intervals grow shorter and shorter till they are reduced to days, when the case must be considered as upon the verge of the second stage. It may, however, pass into this stage while the intervals are still of considerable length. The premonitory stage usually runs its course in a few months but may continue for years. On the other hand, but two or three attacks may precede the onset of confirmed glaucoma.

When this point is reached the patient is suddenly seized, often during the night, by an intense, often agonizing pain in the eye, side of the nose, temple, and extending over the side of the head, perhaps even as far as the occiput. The lids are greatly swollen; the vessels of the conjunctiva and sub-conjunctival tissue are gorged with blood; there is abundant sub-conjunctival edema, the cornea is clouded and its sensibility may be somewhat diminished, from pressure on the nerves which supply it, through increase of intraocular tension. The anterior chamber is shallow; the aqueous and vitreous humors are ~~so~~ hazy that the fundus is almost invisible. The pupil is dilated, and the tension of the eyeball is extreme. As might be supposed, the impairment of sight is very great, and it may even be irrecoverably destroyed. In elderly persons the greenish reflex from the pupil is sometimes seen during such an attack. This arises from a combination of the yellowish tint which the crystalline lens acquires in advanced life with the grayish-blue color of the turbid aqueous humor. If the details of the fundus can be discerned the retinal vessels, to the arteries and veins, will be seen to pulsate either spontaneously or upon the slightest pressure on the globe of the eye. The optic nerve may have lost its normal color and acquired a deeper red, or a yellowish

tinge. Cupping of the optic nerve is not usually seen after one such attack, more protracted pressure being necessary for its production. The loss of sight which follows is, therefore, not due to this cause, but was believed by Von Graefe to be the result of degenerative changes in the retina, arising from derangement of the intra-ocular circulation.

The inflammatory action may subside after a time and vision be partially restored, but the disease is still at work. The inflammatory attacks recur repeatedly, each time leaving the eye in a worse condition, or the disease may assume the chronic form, in either case ending in the total destruction of sight and often leaving the eye ball permanently painful.

The sub-acute variety of the disease is simply a modified form of the foregoing, in which the symptoms are the same but much less severe, we will therefore pass at once to the consideration of

Chronic inflammatory glaucoma. This form of the disease passes through the same premonitory stage as the preceding varieties, and then assumes a condition similar to that which follows the termination of the inflammatory process in acute glaucoma. There is vascular congestion of the ciliary region of the sclera; the anterior ciliary veins are turgid; the sclera acquires a striking whiteness; the cornea loses its sensibility and its surface appears rough and uneven from loss of epithelium. The anterior chamber is shallow, the iris often lying almost in contact with the cornea; the aqueous humor is turbid; the pupil widely dilated and inactive, and sometimes presenting an appearance very similar to that of senile cataract, although the lens may be perfectly transparent. It is well to remember this fact, for such a case may be mistaken for cataract and advice given which, while proper in cataract, would be inevitably fatal to sight in glaucoma. It is true, however, that cataract is a not infrequent sequence of this disease. The tension of the globe steadily increases until it attains an almost stone-like hardness. While these changes are in progress the patient suffers more or less pain not only in the eye but also over the forehead, temple and side of the nose. Vision steadily deteriorates until sometimes not even a trace of perception of light remains.

With the ophthalmoscope the following changes are observed. The vitreous humor is clouded; the retinal arteries and veins pulsate either spontaneously or upon slight pressure, and there may be extravasations of blood on the retina. The optic nerve is deeply excavated; the vessels on the surface of the optic disc are indistinct, and, as they cross its periphery to the retina, appear broken or interrupted. This arises from the fact that the perforation in the sclera through which the optic nerve enters the eye is the frustum of a cone with its base outward. When therefore, the nerve, and with its the vessel which course over its surface, are driven back in the process of excavation, the inner margin of this cone overhangs and conceals the latter as they approach the periphery of the optic disc, and when they reappear after having surmounted the edge of this pit they seem to be entirely disconnected from the vessels on the bottom of the excavation. With the bin-ocular ophthalmoscope the excavation is seen with the utmost distinctness. The normal pinkish tint of the nerve is changed to a pale grayish hue, and the lamina cribrosa becomes visible.

Etiology.—The etiology of glaucoma is still involved in uncertainty. The main feature of this disease is increased intra-ocular pressure. This may be produced artificially by ligating the posterior ciliary veins, and as these vessels pass obliquely through the sclerotica it is probable that in the hardening which this coat undergoes in advanced life, a certain amount of compression is exercised upon these vessels, as they make their exit, and the ready efflux of blood interfered with just as in the experiment with the ligature. It has been found also that irritation of the 5th pair of cranial nerves produces a hypersecretion and consequent tension which is greater than that following another artificial cause.

Prognosis.—Unless properly treated the prognosis, in all forms of glaucoma is that the disease will lead to the total destruction of sight, nor does it always end here for the eyeball may be left the site of permanent pain.

Treatment.—We now come to the subject of treatment. Man 

methods have been tried, both before and since the introduction of iridectomy in 1856, by that prince of clinicians, the lamented von Graefe, of Berlin, but none of them has been found productive of permanent benefit. Von Graefe was the first to recognize in abnormal increase of intraocular pressure the essential element of the disease, and he it was who in the operation of iridectomy gave to the world the only adequate remedy for this condition which has yet been discovered. The superiority of this over all other means has been so amply proven that when a case of glaucoma presents itself the fiat of the surgeon must be iridectomy or no responsibility whatever—and this for all forms of the disease. Of course the degree of benefit to sight to be attained through the operation will vary with the state of the case. The earlier it is resorted to the more it will accomplish. In cases of glaucoma simplex of long standing it may do no more than preserve the degree of sight that remains, while in recent cases vision may continue to improve for months after its performance, more especially if the case have been attended with inflammatory symptoms. Its most brilliant results, however, are achieved in case of acute glaucoma. The inflammation and pain, both often severe, rapidly subside, and vision, which may have been almost extinguished, is speedily restored.

Much also depends on the way in which the operation is performed. In order to be effectual the incision must be made in the sclera, fully half an inch from the clear margin of the cornea and a section of the iris, embracing at least one-fifth of its circumference removed. When the anterior chamber is very shallow, the pupil widely dilated and the iris consequently reduced to a narrow rim, which is perhaps partly concealed by the haziness of the corneal margin, known as *arcus senilis*, the narrow cataract knife of Graefe is better adapted to the performance of the operation than the ordinary lance-shaped keratome.

Therapeutically, the direction in which the iridectomy is made is a matter of indifference, but for optical purposes it is better to make it upward, for then the upper lid will cover a considerable

portion of the artificial pupil and thus cut off a portion of the light which would otherwise be irregularly refracted. It is also better for cosmetic effect as the deformity is then to a great extent concealed.

I have perhaps already detained you too long. My aim has been to present a digest of what is known of this disease and thus assist you in recalling what you have no doubt already learned but which in the cares of general practice may have been forgotten.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

THE COMPOSITION OF PILULA HYDRARGYRI. By HAROLD SENIER. *

It has often been stated that the medicinal activity of those mercurials in which the mercury is used in the metallic form, and in a minute state of division, is due chiefly to a small quantity of oxide formed by contact with the air.

Thus, as regards *Pilula Hydragyri*, "Donovan,* cited by Thomson (*Pharmaceutical Journal*, vol. iv, p. 413), states that when made with oxide of mercury instead of metallic mercury, it is quite as efficacious; and Thomson himself long thought that the efficacy of the old pill depended in great measure on the presence of a portion of oxide of mercury derived from oxidation of the metallic mercury, when in that fine state of division to which it is necessarily brought by long tritu-

(*) Extracts from the full report of an investigation in the Laboratory of the Pharmaceutical Society of Great Britain, published in the *Pharmaceutical Journal*, Feb. 5th, 1876, and received in advance sheet, by favor of ALFRED SENIER, P. C. F. C. S.

* Quoted from Professor Attfield's critical examination of the British Pharmacopœia of 1864, *Pharmaceutical Journal and Transactions*, 1863-4, p. 631.

ration with the confection of rose and liquorice. Tyson, an excellent therapeutist, as well as a good practical chemist, states (*Pharmaceutical Journal*, vol. i. p. 451) that the *Pharmacopœia* blue pill is, under the best management, a very uncertain preparation. He made *pilula hydrargyri* with the black oxide, and communicated his formula to the *Pharmaceutical Journal*."

Several samples from leading London manufacturers were submitted to chemical examination. The separation of organic matter was tried and found to make no difference with the results, and was therefore dispensed with, and the various samples examined in the manner described below for (a) *mercuric oxide* ; (b) *mercurous oxide* ; (c) *metallic mercury* ; (d) *ash*, and (e) *organic matter*, together with whatever amount of moisture might originally be united with the organic matter.

(a) *Mercuric oxide*.—Two grams of the mass, fairly averaged, was weighed and digested in dilute hydrochloric acid, the whole placed upon a filter, and the residue washed with warm water, the washings being added to the filtrate. Excess of acid in the filtrate was carefully neutralized by ammonia, stannous chloride added and the whole warmed. The precipitated metallic mercury was collected on a balanced filter, dried over sulphuric acid, and weighed. This weight was calculated into mercuric oxide.

(b) *Mercurous oxide*.—A fresh portion of two grams was digested in solution of hydrocyanic acid, of about five per cent., the mixture filtered, the residue on the filter washed with water, and the washings added to the filtrate. Excess of acid in the filtrate was neutralized by ammonia, and stannous chloride added, the whole warmed, and the mercury collected, dried, and weighed as already described. From this weight the weight of mercury existing as mercuric oxide was substracted and the remainder doubled, giving the weight of mercury in the mercurous form. This weight was calculated into mercurous oxide.

(c) *Metallic mercury*.—Another portion of two grams was treated with quick lime, bicarbonate of sodium and chalk, in the usual manner for mercury combustions (*vide* 'Attfield's Chemistry,' 6th Ed., p. 652).

From the weight of total mercury was subtracted the sum of the weight of mercury which existed as mercuric and mercurous oxides, the remainder representing the weight of metallic mercury.

(d) *Ash.*—Two grams were incinerated and the weight of ash determined.

(e) *Organic matter* and moisture.—Having added together the weights of mercurous and mercuric oxides, of metallic mercury, and of ash, the difference between their sum and the weight taken, was considered as the organic matter of the Pilula hydrargyri.

The following table gives a *resume* of the results, calculated into per centages, obtained in the case of nine samples. The second column gives the age as nearly as it could be ascertained:—

COMPOSITION OF PILULA HYDRARGYRI.

	Age.	Metallic Mercury.	Mercuric Oxide.	Mercurous Oxide.	Ash.	Organic matter.
1	18 hours.	32.49	none.	a trace.	1.20	66.31
2	5 weeks.	32.26	.09	.25	1.20	66.20
3	3 months.	31.60	.24	.62	1.18	66.36
4	3 months.	31.15	.44	1.60	1.12	65.69
5	6 months.	32.44	.50	.80	1.70	64.56
6	14 months.	29.86	.98	2.60	1.20	65.36
7	19 months.	31.59	.50	2.50	1.00	64.41
8	2 years.	28.40	1.80	4.22	2.10	63.48
9	?	30.23	1.06	3.24	1.05	64.42

The proportion of mercury present, considering that which occurs combined with oxygen, as well as that existing in the uncombined state, does not vary much from the requirements of the Pharmacopœia, one-third mercury, two-thirds organic matter.

It will be noticed that, relatively, the proportion of mercurous oxide very much exceeds the mercuric, and that the proportion of both increases with the age of the sample; thus No. 1 (18 hours), contained no mercuric oxide, and only a trace of mercurous oxide, while No. 8 (2 years), contained 4.22 per cent of

mercurous oxide, and 1.80 per cent. of mercuric. No. 7 is somewhat exceptional as regards this relation of age to proportion of oxides, but in this case globules of mercury were plainly visible to the naked eye, which fact may account for the slowness of the specimen in becoming oxidized. No. 3 is the only sample of hand-made mass, hence might be expected to be less oxidized than the others, all the others having been made by machinery.

In conclusion, then, it is clear from these experiments, that if, as has been stated, the therapeutic action of *Pilula hydrargyri* depends largely upon the proportion of oxides present, the age of the mass becomes a matter of primary importance. I have known the dose of *Hydrargyrum cum creta* to be modified in accordance with its age, and it would seem probable that a similar course should be followed with regard to the preparation. At all events the pharmacist is now in a position to assure the therapeutist that in prescribing *Pilula hydrargyri* he is ordering a medicine liable to vary considerably in composition, and probably liable to vary as considerably in medicinal efficacy.

MONOBROMATED CAMPHOR. Condensed from *Arch. Gen. de Med.* of Nov. 1875. By F. A. CADY, B. A.

At the August session of the French Academy, M. Clin read an essay upon the preparation of monobromated camphor, a product in which one atom of bromine displaces one atom of hydrogen of the camphor. M. Clin had obtained some fine crystallized samples by the direct action at 100° C., of bromine upon camphor, without pressure and without distillation.*

Upon some points of the physiological and therapeutical action of the monobromate of camphor, M. Bourneville remarked as follows: 1st. Monobromated camphor diminishes the frequency of the hearts beat, and strengthens the contraction of

(*) For an elaborate report by J. M. MAISCH, upon the preparation of this compound, by heat finally increased to 132 C., in a retort with ascending neck, the product being crystallized from petroleum naptha, see *Am. Jour. Phar.*, 1872, p. 337.

auricle. 2nd. It diminishes the number of respirations without interfering with the rythm. 3d. It lowers the temperature in a regular manner;

In cases of its administration to animals, in fatal doses, this lowering continues up to the end. Thus among cats the temperature is seen to fall from 39° C. to 22°. Among animals which recover, the lowering of the temperature is followed by an elevation which reaches the initial figure, but in a longer time than that the lowering occupied. 4th. Monobromated camphor possesses sedative properties which appear uncontested. 5th. It produces no trouble in the digestive functions, but its long continued use, causes, at least in cats and guinea pigs, quite rapid emaciation.

M. Charcot has employed it with very satisfactory results in different nervous diseases—chorea, hysteria, shaking palsy, etc. Among the diseases in which the Monobromated camphor has been tried, we will especially mention cardiac affections of a nervous origin, asthma, cystitis without catarrh, and finally in cases of epilepsy in which paroxysms occur with vertigo.

SUNDRY NOSTRUMS.

The following articles, proposed as very remarkable remedies, but without statement of composition, have been analyzed at our Laboratory of late.

Cancer cure.—A blackish soft solid, having a strong smell of opium. Contains *opium* and *chloride of zinc*, with traces of arsenic and of sulphate of zinc. The amount of morphia was found to be 6.4 per cent., equivalent to 64 per cent. of standard opium in the mixture. The zinc chloride was in large proportion; the arsenic in so small proportion that its presence may have occurred as an impurity in the zinc salt. It was directed for external application.

Remedy for Seminal Weakness.—Furnished at a very high price by a physician, advertising from an eastern city, and found very valuable to the patient. A gray powder, consisting of

cotton-root bark, gentian, calcined magnesia, bicarbonate of potassium, cochineal and sugar. The cotton-root bark was identified microscopically and by the chemical characteristics of the resin ; the gentian chiefly by the deportment of gentianic acid.

Oxygenated Bitters.—Found to be valuable for indigestion, etc. Contains all the constituents of *aromatic sulphuric acid*, and water. The absolute sulphuric acid (hydric sulphate) is four per cent. of the mixture,—indicating about one part of aromatic sulphuric acid to three parts of water.

Antidote to the Opium Habit.—A pale purple solution. Constituents, *morpbia sulphate, quinine sulphate, glycerine, anilin* color.

Pills for Catarrh or Sore Throat.—Consists of the pharmacopeial powder of *ipecacuanha and opium*, with a very slight proportion of some adhesive material not ascertained.

Selections and Translations.

NOTES OF A CASE OF BLUE URINE—SPECULATIONS UPON THE PROBABLE NATURE OF THE BLUE MATTER SOMETIMES FOUND IN URINE. Par A. ROBBIN, Interne des Hopitaux. Translated by HAL. C. WYMAN, M. D., Blissfield, Mich.

This urine was voided by a hysterical woman, aged 35 years, of remarkable obesity, who has had repeated attacks of paralysis, amaurosis, etc ; very nervous ; a patient of Doctor Maillard, of Dijon. One month ago, she was taken with severe pain between the ribs of the right side, radiating down into the lumbar region ; when this pain ceased the patient passed a small quantity of blue urine. Since that time she has had a second paroxysm of pain similar to the first which was also followed by an emission of blue urine.

Character of the Blue Urine.—It is passed in small quantities ; its emission is painful ; it is not entirely blue, but is preceded b

urine in the sediment of which is found a large quantity of blue matter; in the urine following a notable amount of this blue sediment is also found.

Sp. gr. of the first flow of urine,	1.015.5
" " blue urine,	1.025
" " consecutive flow of urine,	1.018

The urine is very turbid; its odor is not that of ordinary urine, but seems to resemble the odor exhaled from solutions of indigo; its reaction is strongly acid; color indigo blue, very dark, with streaks of violet; by reflection, it is quite violet, but, by transparency it is absolutely blue. It leaves a considerable precipitate of blue color. Under the microscope are found blue masses without any trace of crystallization in them; the vesical and vaginal epithelial cells were colored a pale blue. Heated, the urine loses its blue color and becomes a violet red. Filtered, it remains pale blue, but exposure to air and fermentation gives it a wine red merging on to violet color.

Urea and uric acid are very much diminished. The proportion of phosphates seems to be little influenced. The precipitate found on filtering after fermentation contains quantities of triple phosphates and an appreciable quantity of silica.

Of the blue substance: it is slightly soluble in water and with difficulty soluble in heated alcohol and ether; insoluble in chloroform, spirits of turpentine and benzine. Insoluble in the alkalies. Soluble in sulphuric acid, causing a rose color which shortly becomes orange red. Soluble in hydrochloric acid, causing a magnificent carmine color, which is a characteristic reaction. Slightly soluble in acetic acid, which does not modify the color. Precipitated from its acid solutions by the alkalies, becomes *mauve* in color by the addition of chloride of zinc. Bleached by nitric acid and its compounds with chlorine. Heated, it disengages carbonate of ammonia and a brown empyreumatic oil. Heated to redness, it disappears without leaving a residue. This blue substance resembles chemically no other known blue substance. Does it resemble any of the blues hitherto found in urine? Hippocrates, Galen, Actuarius, Bellini and

many others have described and observed blue urine. The authors who have studied the blue substances of urine, have given them divers names—urocyanose, uroglucine, indican, indigose, cyanarine, etc.; others have admitted these coloring principles to be of biliary origin or of the prussian blue, etc. To-day one cannot attribute it to more than one single substance, indigotine, indican, which by being doubled, becomes uroglucine or indigo blue.

It is easily seen by examination of the reactions hereinafter described, that our blue substance bears no resemblance to uroglucine, but it bears marked analogies to cyanourine of Bracanot. This cyanourine, ignored by most authors, exists there; it is not as some pretend, a biliary coloring principle; it is positively unlike uroglucine, to which urologists have simulated it; it is a specific compound upon the nature of which we are not yet fixed, but we have commenced, in the laboratory of M. Thenard, researches for the purpose of elucidating this obscure point. We have thus far established this fact, that the cyanourine really exists.

What is the origin of this substance?

Bracanot, not finding uric acid in the urine that he examined, believed that the blue substance was a product resulting from the transformation of uric acid. Our specimen contained uric acid, but in small quantity, it is true. We will venture the following hypotheses which we will try to sound:

1st. Among the derivatives from the oxidation of uric acid, we find bodies colored blue, such as violantine, etc.; cyanourine, is it similar then to any of the substances derived from uric acid? It must be a substance intermediate between uric acid and urea, an intermediate more oxydized than uric acid, less oxydized than urea.

2d: Nencki has described, among the products resulting from the action of the pancreatic juice upon albuminous substances, a principle by the name of indol, from which the indigotine of the urine must be derived. Can cyanourine have an origin of the same order and can its presence in the urine serve to signify a pancreatic affection?

We shall soon give a hypothesis to which we shall commit ourselves, according to the results of our own researches, at least if these two hypotheses are sustained by the results of experience.—*Le Progrès Médicale.*

IODOFORM—ITS THERAPEUTIC APPLICATION. By DR. L.
LAZAUSKY, in *Schmidt's Jahresbcher.* Translated and condensed by
DR. CONRAD GEORG, Ann Arbor, Mich.

Iodoform is employed at the Clinique of Prague, and is recommended in the following affections:

1st. Diseases depending on either tuberculosis or scrofula and in chlorosis and amenorrhoea.

2d. In chronic glandular affections, struma, etc.

3d. In malignant ulcerations, carcinoma of the uterus and rectum. It has been employed in the form of suppositories in these affections, with the effect of materially mitigating the pain. It is not, however, to be employed in recent cases.

4th. In chronic neuralgias and especially in those of syphilitic origin. In these it is employed in alcoholic solution—¹ part to 100, and in the form of salve or ointment.

5th. In the form of suppositories in chronic, painful swelling of the prostate and in painful affections of the bladder.

6th. In diseases complicated with syphilis and local syphilitic affections. Gummy tumors disappeared after two large administrations of three grains daily. Besnier (Bull. de Thérap., LXXII, 1867), speaks of iodoform in primary syphilitic affections in which its use was followed by a speedy abatement of pain and cicatrization facilitated. Applied locally in the form of powder it produced good results in ulcers of the uterus, nose and pharynx.

Bozzi has employed it with success hypodermically.

Carlo d'Amico (Giovn. Ital. delle malet. ven. et della pelle, 1870) designates iodoform a specific in chronic venereal ulcers and uses it in preference to powerful escharotics. The cure took in from a few days to three and a half months.

Profelta reports five cases of fresh multiple, non-indurated ulcers which were cured in 5 to 7 days by iodoform, locally. In one case of recent multiple non-indurated ulcer with inflamed phymosis, the latter affection was cured in 7 days; complete cure in 37 days; two cases of old multiple non-indurated ulcers, cured in 8 to 23 days; one case of old multiple non-indurated ulcer with adenitis cured in 20 days; two cases indurated ulcers, cured in 32 days; two cases of phagedenic ulcerations after buboes of long standing, cured in 29 days.

Iodoform was also used internally in combination with iron, also in mixtures of albumen and water.

At Pick's Clinique (Prague), 100 syphilitic patients were treated with iodoform with general good success, externally in form of powders, according to Izard's direction, and in solution of ether (1:15), according to Pick, and internally in pills (0.1 grm. each) 6 to 8 daily.

The following are some of the cases thus treated: 1. *Specific ulcers*; 42 patients, 18 males and 24 females. We shall give a few in detail.

Case 1. Female, received Aug. 24, 1874. According to her statement she was sick for three days; never before infected. Deep and extended specific ulcers were found at vaginal orifice. Inguinal glands painful and swollen to size of hazelnut; urethritis and vaginitis. The ulcers were treated without success till Oct. 6, with copper solutions. From that date with iodoform, and were cured on the 8th of November.

Case 2. Male, aet. 22, admitted Sept. 16; infected for first time 14 days previously. Numerous papilloma around the glands, likewise acute gonorrhœa; inguinal glands swollen to size of hazelnut. The condylomata were partly removed with scissors and in part with carbolic acid. On Oct. 13, a deep, non-indurated ulcer was noticed at frænum, which was treated locally with iodoform powder and cured in four days.

Case 3. Female, aet., 23, admitted Sept. 14; infected eight days previously. Numerous ulcerations around vaginal orifice, and especially on posterior commissure; numerous excoriations

between rectal folds, vaginitis, blennorrhœa. Treatment, dry bandage for excoriations, ung. hydrarg for ulcers, alum, tampon and inunction. Oct. 10, a deep ulcer was healed on post-commissure, with copper bandage; Oct. 23, an abscess of Bartholin's glands opened, and at this point an ulcer appeared a few days subsequently, which was cured with copper bandage. On Nov. 2, a similar abscess was opened on right side, and the subsequent ulcer treated as the previous one. On the 17th of Nov. the ulcer was very unclean, it was now treated with iodoform and cured by 27th of November.

Case 4. Female, aet., 15, was received on Oct. 6, with vaginitis and blennorrhœa. On Oct. 27 a small ulcer appeared to left of caruncula myrtiform, which was treated with copper bandage and cuprum sulph., without effect. From Nov. 12, it was treated with iodoform and cured by Dec. 8.

Case 5. Male, aet., 40, admitted Oct. 12, sick for three weeks; four characteristic specific ulcers were found on penis, and besides these numerous small ulcers around margin of phymotic, swelled prepuce, and also a few ulcers on anterior of scrotum, and one on inside of right thigh. Numerous mucous patches were found in mouth and pharynx. Inguinal glands swollen. Treatment: iodoform internally and externally; all ulcers cured Oct. 30.

Case 6. Male, aet., 43, had suffered for four weeks with hard specific ulcers on frenum, and four small ulcers around prepuce. Inguinal glands swollen. He was received on Oct. 30. Treatment with iodoform was commenced on Nov. 1; all ulcers healed on 13th of November.

Case 9. Male, aet., 17, admitted Nov. 17, after being infected eight days. Inflamed phymosis, profuse, dirty yellowish, bad smelling pus flowed from the orifice of prepuce, numerous deep specific ulcers around its margin, and a hard painful knot was felt in region of frenum. Nov. 18, preputial orifice was syringed with iodoform mixture. On Nov. 25, prepuce could be drawn back, and a small ulcer was discovered on lower surface of glands, which was cured by Dec. 7, with iodoform in powder sprinkled on its surface once daily.

The medium time of treatment (in all cases) was $14\frac{1}{2}$ days; shortest time two days; longest 35 days. Iodoform was also successful in every case in which it was tried from the beginning. It has no action whatever in inducing retrogression of indurated ulcers. In most cases a burning pain was produced in the ulcers on first application, which was not subsequently observed. The lardaceous ulcers were cleaned by one application. In inflamed phymosis depending on ulcers, the skin could generally be drawn back within five or six days treatment. Iodine was detected in urine within 12 hours after external application. Where healing was slow iodoform was used in powder over surface of ulcer, and was covered with guttapercha paper and charpie, or with the latter alone. The bandage was renewed once in 24 hours. A mixture (2 or 3 grm. 30 grmm. glycerine, 10 grm. alcohol) was afterwards used where the preputial sac was found covered with ulcers. The ether solution (1:15 or 1:30) in cases in which the ulcer was to be treated with penciling or syringing, as in phagedenic ulcers in rectal folds.

II. *Ulcerations after buboes.* Of these there are 13 cases reported.

Case 13. Male, aet., 24. Inguinal swelling on left side was said to have commenced 10 days after ulcer and increased rapidly for three weeks. Gonorrhœa and an ulcer on lower part of glans were present when patient was received at clinique. In left inguinal region was a fluctuating swelling of size of a large fist, the skin covering it was greatly inflamed, very thin and immovable. The bubo was laid open at once and a large cavity was found, the borders of which were undermined and greatly infiltrated. It was washed twice daily with iodoform ether. On April 7, the ulcer was covered with a hypertrophic, yet very flexible cicatrix.

The author lauds the favorable action of iodoform on opened buboes. Its action was very remarkable: after a few days the granulations became strong and the cavity filled up rapidly.

III. *Ulcerated and Weeping Papilloma.* 10 cases reported.

Case 9. Female, aet., 27, received March 30. She had been

treated frequently for venereal disease, and was now sick one week. On the labia and genito-crural fold there were several strong elevated, macerated condylomata; papulæ mucosæ on mucous membrane of mouth and pharynx; sharp condyloma on vaginal orifice, urethretis and general swelling of glands. The condylomata were completely removed in six days by iodoform.

IV. *Ulcerations after destruction of gummy tumors of skin.* In the two cases of this kind iodoform has proved itself a remedy which reduces the secretion of pus, increases granulations; fills cavity rapidly, and hastens cicatrization. Iodoform acts far more energetically than Iodide of Potassium.

V. *General lues without ulceration of skin.* In 20 cases in which internal treatment was indicated, iodide of potassium was replaced by iodoform, in a few cases it was preceded by inunction. In no single case was it found necessary to change treatment, it was always found that the various affections of large knotty tumors of the skin, exostoses, ulcers of nasal cavity, and on hard and soft palate, and larynx healed rapidly. Unfavorable action was never observed, although iodine acne frequently followed its use.

VI. *Ulcera cruris.* 11 cases are reported.

Case No. 5. Male, aet., 24, received Dec. 23. Ulcers first appeared on both thighs 13 years previously, which were renewed twice in this time. There were three round ulcers of 0.5 to 1.5 inch diam. on lower left thigh, the surrounding skin thickened, callous moveable. Cicatrices were found on right thigh. Ung. diachyl was first used along with roller bandage; the ulcers were cleaned by this treatment, yet healing made no progress. On Jan. 3, six pieces of skin were transplanted unsuccessfully; Jan. 6, iodoform bandage; Jan. 11, ulcers cured.

In 9 out of 11 cases of large ulcers on legs, a cure was effected with iodoform in very short time. The ulcers were generally of long standing, often for years, with frequent relapses; edges and surrounding skin indurated, immovable over bone and muscle.



The author sums up his views on Iodoform as follows:

1. Time of treatment is shorter in majority of cases.
2. Method very easy, and can be adopted in private practice.
3. Treatment is not very expensive, very little of iodoform powder being necessary to cover ulcer.

DIAPEDESIS OF LEUCOCYTES IN MAN.—ITS ANATOMO-PATHOLOGICAL DEMONSTRATION. By LEON COLIN, Prof. at Val-de-Grace. Translated by W. J. HERDMAN, M. D., Demonstrator of Anatomy, University of Michigan.

The absence of color of leucocytes in the normal state, the utter impossibility of detecting in *post mortem* a trace of their passage through the several tissues, does not permit us to verify the migratory movements which they have performed during life. He who dares affirm, for example, that these globules escape by transudation through the vascular walls may be challenged to produce proof, a proof impossible to furnish in view of the absence of all trace of such transudation.

On the contrary, it is impossible for the leucocytes to be dyed by a coloring material capable of disposing itself in such a manner as to mark their course upon the tissues through which they pass, so that even after all vital movements have ceased the evidence will remain that such movements have taken place.

There is a state of the system in which precisely this sort of coloration exists, the study of which brought us to consider the diapedesis of leucocytes in man as a normal condition; this state is that of malarial poisoning.

To sum up then the current opinions upon the diapedesis of leucocytes, this is what Claude Bernard says:

"Diapedesis, the name by which the escape of the white corpuscles from the blood is designated, is incontestable. It takes place by means of minute openings (*stomata* and *stigmata* of the German authors) existing between the epithelial cells which alone form the walls of the blood capillaries; openings which become much enlarged under the influence of inflamma-

tion in the tissues, and of the congestive dilatation of the capillary network.

Could we have witnessed the successive stages of the exit of the white corpuscles, we would have seen them become entangled in the wall, traverse it by elongating and compressing themselves, and finally freely extricating themselves, after a longer or shorter time, and escape into the perivascular tissue. Finally, in order to show that the white corpuscles observed without the vessel proceed from its interior, such a label ought to be placed upon them, so to speak, as would serve to establish their identity, that is their origin, when they are found transuded. By injecting into the blood, water holding in suspension minute molecules of vermillion, it is soon observed that the white corpuscles circulating in the vessels have by virtue of their amœboid properties taken up these colored particles.

Now, when several hours thereafter numerous white blood corpuscles are seen outside the vessels enclosing numberless vermillion granules we conclude that these extra vascular corpuscles are the result of diapedesis.

Contradictory works are not wanting which have sought to put experimenters on their guard against certain sources of error that might arise from the arrangement of the vascular wall, or from the presence of numerous cells of connective tissues in their neighborhood, and, indeed, it has been claimed that the vermillion granules may themselves have escaped from the vessels without necessarily employing the white corpuscles as a vehicle. These questions are still *sub judice*, and Pathological Anatomists seem at present to be divided into two parties, the one side admitting diapedesis, while the other explains all the phenomena embraced in this name by a proliferation or a genesis of lymph corpuscles lying in close contact with the vascular walls.

An effort has also been made to find in diapedesis the origin for the elements of pus. Suppuration is reduced thereby to ~~an~~ ^{an} exudation of white blood corpuscles. It would be difficult ~~to~~ ^{to} argue or judge accurately concerning this theory at present.

The simple statement of it enables you to catch a glimpse of the exaggeration or narrowness it may involve. Simple exudation is insufficient to account for the enormous masses of globules of pus accumulated in those places where suppuration is even the least active. A primary modification, or rather an addition which it seems ought to be made to the theory of diapedesis as far as it touches the theory of suppuration, should be to take account of the proliferation of the white blood corpuscles escaped from the vessels. The division and multiplication of these elements is a fact perfectly demonstrated in circumstances of this kind. M. Ranvier noted it quite recently while experimenting with white corpuscles placed in a wet chamber, and kept at the temperature of the body. This proliferation would then be able to supply the deficiency of exudation and to account for the abundance of pus corpuscles."

Observed from our point of view that which interests us most in this passage is the affirmation made by the illustrious professor: 1st. Concerning the appearances of vitality of leucocytes, and 2d. Their power to migrate through the walls of the capillaries. Numerous actual experiments have been added to those which were published in this journal (*Archives Generales de Medicine*), ten years ago relating to the contractility and amoeboid movements of leucocytes. Still more recently Prof. Rouget demonstrated how active was the role of the white corpuscles, which without the least commotion put forth their tentacular prolongations, by means of which they change their place, or attract to themselves material for their nutrition. It is important to note that this activity of leucocytes is much greater among the higher species of animals. It is only necessary, according to Schultze to raise to a certain temperature the blood drawn from the vessels of these animals, in order to see amoeboid movements, resembling very much the movements of crawling. With regard to the power of leucocytes to seize upon the particles of solids, even liquids with which they come in contact, it is proved not only by the passage to their interior of foreign bodies as cinnabar, analine, blue and milk globules,

but still more by the rapidity with which they absorb the other morphological elements of the blood, especially the red corpuscles under certain given circumstances.

Thus Prof. Rouget noticed, especially in the case of the tadpole of *cultipes provincialis*, that subsequent to traumatic extravasations of blood the leucocytes enclosed in the hemorrhagic centre, enveloped by means of their amoeboid prolongations, the red blood corpuscles which commenced to undergo a certain change, and were received into the substance of the former, and having been digested by them, the pigmentary residue remained infiltrated throughout their substance.

It is necessary here to note a fact of importance to the subject under discussion, which is, that when this absorption is accomplished, and the protoplasm of the leucocytes so distended by the red corpuscles that it constituted but a layer, almost imperceptible, upon the surface, still the amoeboid movements and prolongations persist and enable the corpuscles to migrate in the most contrary directions.

Respecting the migration of leucocytes through the walls of the vessels, M. Claud Bernard, according to the citation which we have made from his lectures, appears to admit it only at certain points in the course of circulation, *i. e.*, where an irritation, artificial, or otherwise has more or less modified the anatomical state of the vascular walls, as well as the conditions of pressure, and the activity of the blood, and where the migration of the white corpuscles is sufficiently abundant to constitute layers and purulent points.

Many experimenters who have verified transudation, and who have demonstrated it, consider it only as a pathological process, occurring only locally in certain inflamed regions, and it is certain that under such circumstances it is manifested with its maximum of evidence and activity, as in the experiments made upon the capillaries of the mesentery of frogs, or upon the natatory membrane.

But on the contrary other physiologists consider it in the lower animals, as a fact much more general and independent of

all traumatic conditions. Thus according to Prof. Rouget in the case of the larvae of *Hyla viridis* and of *Pelodytes punctatus* the white corpuscles traverse the walls, that is escape by diapedesis, *in the absence of all increase of pressure, and in the normal state of the muscular system* from the walls, not only of the capillaries, but even of the small venous and arterial trunks of the natatory membrane.

(To be Continued).

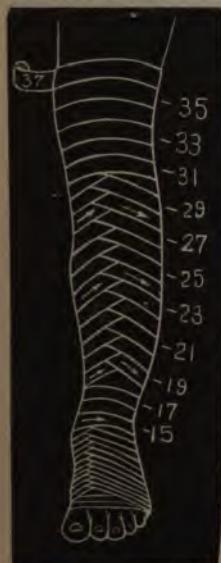
BANDAGING.*

REVERSED SPIRAL OF THE INFERIOR EXTREMITY.

DESCRIPTION.—This bandage is made from a roller eighteen yards in length by two inches in width.

APPLICATION.—Place the initial end of the bandage at the

FIG. 82.



metatarso-phalangeal articulation and confine by two circular turns about the foot at this point. Continue on about the foot in the same manner, only making a reverse at each course of the bandage, until the ankle is reached, as you see in the wood-cut. Or, it is sometimes best to make the last two or three turns about the foot and ankle in figure-of-8's. It is also often necessary to fill up the hollows about the ankle with cotton-wool. Having got so far in the application of the bandage, make three or four spiral turns about the lower part of the leg, courses 15, 16, 17, 18, in the figure, before you begin the reverses about the leg, courses 10 to 30 inclusive; you then come to the

Reversed Spiral of the knee, which may be covered in by The Interior Extremity.

*By permission from "A MANUAL OF BANDAGING," published by C. Henri Leonard, M. D., Detroit.

Testudo, or by the simple spiral turns, 31, 32, 33, 34 and 35, in the cut. Having cleared the femuric condyles, you then make spiral reverses to the hip, where you confine the bandage in the usual way.

USES.—For all the multitudinous purposes that an injured or diseased member may demand. The same caution should be observed here as was spoken of under the Reversed Spiral of the Superior extremity.

CAPUTINA—(ROSETTE STUMP DRESSING.)

DESCRIPTION.—Take from nine to fifteen strips of cloth (according to the size of the stump), having each one and three-quarter inches in width, by two and a half feet in length.

FIG. 86.

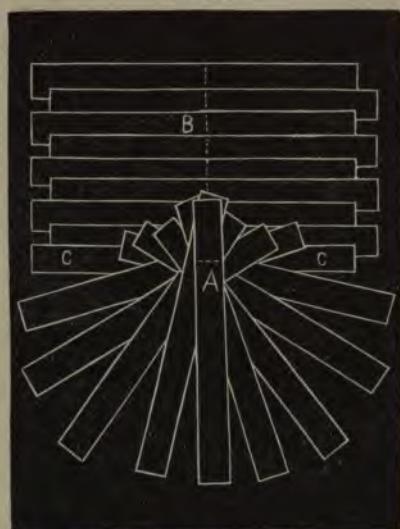


Diagram of the Caputina.

These strips are to be placed in two groups. One set should be so arranged as to form a half rosette, A, whilst the others should be arranged in a parallel group, B, each strip slightly overlapping its fellow. The half rosette, including one strip parallel with the second set, is made secure with a pin, or stitches, at the point of radiation of the different pieces, called its center, as A. The horizontal strips of parallels may now be stitched together at their centers, though this is not necessary. The whole bandage is then spread upon a newspaper. The horizontal strip, C, of the rosette is laid upon the first piece of the parallel strips, (so that the set of parallels becomes but an extension of the rosette), and fastened to it. The object of

spreading it upon the paper is only for convenience in carrying and handling.

APPLICATION.—The stump is now made ready for this final

FIG. 87.



Caputina applied.

bandage. The *center*, A, figure 86, is placed opposite the median line of the under surface of the stump, at a point some six inches from its end, and confined there by the long cross strip, c-c, which encircles the member. The remaining portions of the rosette are then laid, smoothly and successively, over the stump, covering the end completely. The bandage is then finished by passing the horizontal parallel strips, B, over the remaining portion of the limb, securing the free ends of the rosette that are folded over its anterior surface,

thus completing the dressing which is represented, as applied to a thigh-stump, in figure 87.

These parallel strips may be used more or less extensively upon the limb, as the exigencies of the case may seem to demand. This bandage is really but the extension of the principle of that of Scultet's the whole upper portion, B, figure 86, being but the bandage of Scultet.

USES.—This bandage is used only in the dressing of stumps; and it is particularly valuable where pressure is required—as when the flaps retract, making the wound gape, thus leaving the bone exposed. In its application the stump needs be lifted but once, *i. e.*: when the bandage lying upon the paper, is first slipped under—a *desideratum* wanting in all other stump-dressings.

SCAPULO-TIBIAL TRIANGLE AND CRAVAT—(SLING FOR THE INFERIOR EXTREMITY.)

DESCRIPTION.—I. A cravat or scarf, two yards in length.

FIG. 89.



Scapulo-Triangle and Cravat.

II. A triangle whose base measures one and one-half yards, and whose height is two feet.

APPLICATION.—Tie the scarf over the shoulder opposite the injured leg, as A. Place the base of the triangle, near its middle, at anterior surface of the leg, B, and carry the two ends upwards and tie into the "sling" formed by the cravat. Then pin the apex of the triangle at the outer side of the leg, to the base of the triangle, as at C, folding it across the front of the knee, so as to prevent the member slipping too far forwards, and out of its support.

USES.—To support either lower extremity, when injured; or to hold moderately flexed the leg upon the thigh. Is a very convenient and useful dressing.

(To be continued.)

AMPUTATION OF CARBUNCLE (*Trans. of the Med. Soc. of the District of Columbia*).

Dr. Triplett, at a recent meeting of the Society, called attention to his mode of treatment of carbuncle, which is by amputation, and cited two cases in which this method seemed to have produced excellent results. In the debate which ensued, he held that nothing in the principles or practice of surgery forbade the operation, and that it was only aiding and anticipating natural processes to remove the slough as soon as possible.—*Medical Times.*

Ars, ante omnia veritas.

Editorial.

TRANSACTIONS OF STATE MEDICAL SOCIETIES.

The following editorial from the *Philadelphia Medical Times* is very appropriate. The suggestions therein contained, as a remedy for the evil touched upon, must commend themselves to all medical journals having, as at least one of their objects, the best interests of the profession, and if followed the consequent reduction in the number of journals issued, would perhaps not be an unmitigated evil. It is a notorious fact that this country has more publications of this nature than are adequately sustained. We do not say that, properly speaking, there are too many, for there are physicians enough to give both a liberal pecuniary and literary support to all. The fault lies not so much with the journals as with the profession, who are too largely neglectful of their own interests, in the backwardness with which they contribute to medical periodical literature. We presume that the profession of Michigan is as actively alive to such of its interests as are not directly connected with money-making, as is the profession of any other state, and yet out of its two thousand odd members it is probably safe to say that not over forty per cent. patronize their home journals, and that not over fifty per cent. take any journal whatever, whether published at home or outside of the state. This being the case, it would seem much the better plan for state and local societies, instead of expending annually so much money in the publication of their transactions, to put it where it would do the most good and to extend their moral as well as their pecuniary and literary support to the fostering of home institutions :

There lie upon the table before us a number of volumes and pamphlets, which have been received within a very short time—*Transactions of State and County Societies*—outrunning in num-

ber the most agile reviewer, and rising in dignity from the report of a County Society to the Centennial Publication of the New Jersey State Medical Society, in which is given to the world a full abstract of the manuscript minutes from 1766 to 1866. Nearly all of these volumes contain a good deal of matter which is of interest and well worthy of publication; but, on the whole, the chaff is in such abundance as to make gleaning laborious. The amount of money which is yearly expended upon the printing of Transactions, of very little or no value, in the United States, must be enormous. It seems to us that it would be far better if every County and State Society would subscribe to some journal, to be supplied *en masse* to its members, printing nothing but the merest outline and business minutes, and turning into a useful channel the yearly sum now bestowed upon the typographer. A live weekly or bi-weekly journal would be a continual stream of light to many a place now sitting in darkness, and one year of trial would, we are convinced, render the present plan utterly obsolete. The success of the British Medical Association dates from the time when it created and furnished to its members the *British Medical Journal*. By massing numbers it becomes possible to furnish a costly journal at a very small price per copy. Ten thousand subscriptions at two dollars make twenty thousand dollars, and would support a much more princely journal than could be furnished to three thousand subscribers at four dollars. The strength of numbers is nowhere more apparent than in journalistic enterprises, and, in spite of the enormous amount of journals published in the United States, the need of journalistic light was never greater than at present. The number of journals published, instead of making them superior, through the stimulus of competition, renders them weaker, through the want of food. The subscription list being small, the outlay upon the journal must be proportionate. Let us hope, then, for a consolidation of American journals, and also for the abandonment of the transaction publication, and the adoption, by State Societies, of general subscription to journals in behalf of members.

HOMŒOPATHY IN THE UNIVERSITY.

The communications on this fruitful subject, this month, will be read with interest. We are pleased to learn, both from letters published and others whose publication a want of space forbids, that the revulsion of opinion which we predicted would follow the outburst of indignation which naturally greeted the

announcement of the present plan of organization, has already commenced to set in. We did not think it possible that the profession could long remain unconvinced of the sinister motives which actuates the leaders of the attack on the faculty for its course in this matter. Unfortunately the question is one on which it requires very little argument to stir up an opinion condemnatory of that course. The profession entertains a natural and justifiable prejudice against homœopathy, and with this prejudice to receive them, the arguments which have been advanced, found ready and willing ears. The profession of Michigan, however, have begun to realize that homœopathy is an existing nuisance, and not by any means an imaginary one, and that it must be dealt with radically. Under the "let alone" and the "contempt" (both "immitigable" and silent) policies it has grown to be an evil of magnitude, and that the sooner it is grappled with, the sooner will science be relieved of the irritation it causes. To force the Faculty to resign would perhaps be followed by a temporary truce on the part of the adherents of homœopathy who are at the same time friends of the University; but the truce would at best be but temporary, for until the people with their innate love of fair play have given the system "a chance" they will not be satisfied, and will certainly not cease agitating the matter. The present arrangement is of the peoples' own making and had at its inauguration the approval of the homœopaths. Certainly a more advantageous arrangement for the regular profession could not be desired, and it becomes it, now that it has its opponent "in chancery" for the time being to waive all consideration of ethical points. The homœopaths are heartily disgusted with the existing plan, and nothing could please them more than to have the regular Faculty retire from the field. If they are kept just where the regents with their own approval have placed them, they will shortly throw up the sponge. Of this we are assured. The

people regard the existing arrangement as a most equitable one, and a refusal on the part of the homœopaths to abide by it will deprive them of the abundant store of sympathy which the rallying cry of "persecution" has gathered for them in times past. A refusal on the part of the regular profession on the other hand, to deal with the facts as they now exist, would be misconstrued. Certainly nothing could be more disastrous to homœopathy than the present plan of organization. By it the system is deprived of the pabulum which gives it life, viz: ignorance of the fundamental principles of medicine. As our correspondent, "Another Alumnus," truly remarks, the regular faculty have it in their power to guarantee that homœopathic graduates from the University are proficient in anatomy, physiology and chemistry, and with a thorough knowledge of these, therapeutics will take care of itself. If the present plan is broken up, by all means let the homœopaths be those who shall do it, and do it they must in the very nature of things, and that too before long.

The series of resolutions passed by the medical class are very suggestive. We are informed that they were adopted without a dissenting vote from either junior or senior students. With this fact before us, we naturally enquire whom the "Independent Students" who figured in the March No. of the *Review* are, or rather is? The imprint of that communication is too striking to be disguised by the subterfuge of a *nom de plume*.

MEDICAL ALUMNI ASSOCIATION OF THE UNIVERSITY OF MICHIGAN.

We would call the attention of those of our readers who are graduates of the Medical Department of the University, to the two last clauses of the announcement issued by Dr. W. F. Breakey, Secretary of the above Association. The importance of such associations is manifest, and if the Alumni of the Uni-

versity have been tardy in the formation of theirs; the fact should furnish an additional reason why all who have not yet sent in their names should promptly fall into line. The first meeting, notwithstanding that the call for it was issued but one week before it was held, was a most enjoyable affair, and we doubt not, now that ample notice has been given, that the next will prove both profitable and pleasant.

"It is urgently requested that all who learn of the organization will promptly forward to the Secretary their own address and that of any Alumni they may know; also the names of any they may know to have died, with any interesting facts of their professional lives, and of the time and place and circumstances of their death. And that all who cannot meet with us will send some greeting to those who attend.

"Notice of the place and hour of the business meeting and of the supper will be given through the papers, and it is expected that a large number of Alumni will on this and each succeeding anniversary of their professional birth visit their Alma Mater and greet old friends."

Reviews and Bibliographical Notes.

A TEXT BOOK OF HUMAN PHYSIOLOGY. By Austin Flint, Jr., M. D., Professor of Physiology and Physiological Anatomy in Bellevue Medical College, etc. Three lithographic plates and three hundred and thirteen wood cuts. pp. 978. New York: D. Appleton & Co. Detroit: E. B. Smith & Co.

The encomiums passed upon "The Physiology of Man" are equally deserved by the present work, which is the former prepared in such a manner as to be more serviceable to the student and practitioner. The incomparable work in five volumes is too voluminous for the purpose of a text book, being intended as a book of reference. In the condensed work before us all bibliographical citations and matters of a purely historical

character have been omitted, and we know of no book on physiology better adapted to the purpose for which it is designed. A further reference to it would be but a repetition of what we have said of the larger work, as each volume issued from the press.

THE BODY AND ITS AILMENTS. A hand book of Familiar Directions for Cure and Medical Aid in the more usual Complaints of Adults and Children, etc. By George H. Napheys, A. M., M. D. Philadelphia: A. C. Watts & Co.

As to the propriety of works of this nature, designed as they are for the use of families, there is necessarily some difference of opinion. For our own part we regard them, when they do not attempt too much, as occupying a much needed place. Intelligence on the part of the people on questions of hygiene, physiology, symptomatology, etc., so far from interfering with the physicians' mission, but makes it the more agreeable, and certainly does not lessen its revenue. All things considered, the intelligent matron is she who most readily consults her physician, and most carefully follows his advice and carries out his behests.

Dr. Naphey's work is a vast improvement on the voluminous, and, in many instances, worse than useless "Family Physicians" we sometimes come across in our families. There are, it is true, some points in his therapeutics on which we differ with him, but these it is not necessary to enumerate here. If the work accomplishes what such works should, the families into whose hands it falls will be those least likely to discard their physicians.

A MANUAL OF BANDAGING—Adapted for Self-Instruction. By C. Henri Leonard, M. D., Detroit. One hundred and ten illustrations, pp. 132.

This book is a member of the *Multum in parvo* series which Dr. Leonard has published. The work supplies a place which has heretofore been unoccupied, it being the only book, to our

knowledge, treating exclusively of this subject. It describes and gives cuts of almost all conceivable bandages. To those who have never enjoyed the opportunities during their student's course which a large hospital can alone afford, this work will prove a very valuable aid. No book can, of course, do in this line what actual experience under a skilled instructor can, but where the latter has not been enjoyed, Dr. Leonard's book will be found invaluable. A very practical chapter on poulticing has been added to the work.

Mr. A. Kuhlmann, the instrument maker, has removed from his former premises, which he found too small for his growing trade, to his commodious and elegant quarters at 210 Jefferson Avenue.

METEOROLOGICAL REPORT. C. HENRI LEONARD, M. D., *Observer.*

BAROMETER.—Highest, 30.692; lowest, 29.324; range, 1.368; average, 30.036.

TEMPERATURE.—Highest, 54; lowest, 4; range, 50; average, 28.6.; the highest monthly average in five years.

WINDS.—Greatest velocity per hour, 36 miles; prevailing direction, west, (9 days W., 5 S. W., and 4 N. W.); total number of miles "traveled," 5,986;

RAINFALL.—Greatest daily, 2.41 inches; total, 5.59 inches. The most remarkable rainfall upon record, for this country. Upon one day, the 9th, inst., more rain fell than during the *whole* month of any of the four preceding years. The rainfall for the month was more (by nearly one inch) than the *combined* rainfalls of the February's of '75, '74, '73, and '72.

MOISTURE.—Greatest amount present above time, 3.88 grains to each cubic foot of air; this was on the great rainfall day. The smallest amount was present on the mornings of the 2d and 23d. But at 2 observations (2 p. m. of the 9th, and 7 a. m. of the 10th, inst.) was the per cent, of saturation 100, or complete.

OZONE.—Present on 16 days; maximum coloration 2; this was on the 2d, 4th, 16th and 25th of the month. Only "traces" were found on three days.

SULPHURIC ACID.—Present on the 6th and 7th and the morning of the 10th. Maximum bleaching of the purple paper, 1. This upon each of the three days just mentioned. It might be well to remark that any day, if the paper is exposed by lying upon a flat surface it will be spotted—completely bleached in spots. This is owing to the deposit of coal smoke upon the paper. Hence, really there is *cause* for sore throats in our damp foggy times, although a protected test paper may give no evidence of sulphurous acid in the atmosphere. The particles inhaled may thus lodge on the respiratory mucous membranes and thus induce congestion and inflammation;—that is, if there be any truth in the supposition that this is really a cause for sore throat "Epidemics" in damp foggy times.

MORTALITY REPORT OF THE CITY OF DETROIT FOR THE MONTH OF FEBRUARY. Prepared from Statement furnished by C. H. BORGMAN, Esq., City Clerk.

I.—ZYMOTIC DISEASES.	
Childbirth.....	1
Croup.....	10
Intermittent Fever.....	2
Inflammation of Uterus.....	1
Measles.....	12
Small Pox.....	1
Scarlet Fever.....	1
Typhoid Fever.....	3
Whooping Cough.....	5
Total.....	36
II.—CONSTITUTIONAL DISEASES.	
Cancer.....	1
Chronic Diarrhoea.....	1
Congestive Chills.....	2
Consumption.....	17
Debility.....	11
Dropsy.....	6
Inanition.....	1
Old Age.....	3
Rheumatism.....	2
Tetanus.....	1
Total.....	45
III.—LOCAL DISEASES.	
Asthma.....	1
Bright's Disease.....	1
Bronchitis.....	2
Disease of Bladder.....	1
" Epiglottis.....	1
Enlarged Liver.....	2
Gangrene of Lungs.....	1
Hydrothorax.....	1
Congestion of the Lungs.....	6
Congestion of the Brain.....	3
Convulsions.....	17
Heart Disease.....	3
Inflammation of the Bowels.....	3
" Brain.....	4
" Breast.....	1
" of Kidneys.....	1
Liver Complaint.....	1
Pneumonia.....	21
Paralysis.....	2
Teething.....	1
Ulcer of Stomach.....	1
Total.....	74
Stillborn.....	14
Unknown.....	3
Accident.....	1
Total.....	18
NATIVITY.	
Detroit.....	111
Germany.....	17
Belgium.....	1
Canada.....	9
United States.....	19
France.....	1
Ireland.....	7
Poland.....	1
Scotland.....	3
England.....	3
Switzerland.....	1
Total.....	173
AGES.	
Five years and under.....	93
Over five and under ten.....	4
Over ten and under thirty.....	28
Thirty and over.....	48
Total number of deaths.....	173
Estimated population.....	110,000
Estimated annual death rate in 1,000, from Feb. deaths	18.87
PER CENT. TO TOTAL MORTALITY.	
Zymotic diseases.....	20.81
Constitutional diseases.....	26.00
Local diseases.....	42.77
Under five years.....	53.75
Between five and ten.....	2.31
Over ten and under thirty....	16.18
Thirty and over.....	27.74

MORTALITY REPORT OF THE CITY OF LANSING. From Statement by DR. H. B. BAKER.

DISEASES.	
Gravel.....	1
Scarlet Fever.....	1
Tumor.....	1
Spinal Complaint.....	1
Inflammation of the Lungs.....	1
" Throat.....	1
Consumption.....	2
Total.....	8
Estimated population Feb. 15.....	84,63
Deaths in February at annual death rate in 1,000.....	11.89
NATIVITY.	
New York.....	4
Michigan.....	1
Pennsylvania.....	1
Lansing.....	2
Total.....	8
AGES.	
Under five.....	2
Over five and under ten.....	1
Over ten and under thirty.....	2
Thirty and over.....	3
Total.....	8

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Original Communications.

CASE OF VESICO-VAGINAL FISTULA—OPERATION—CURE.

*Reported to the Wayne County Medical Society, October 28th, 1875. By
THEO. F. KERR, M. D., Detroit, Mich.*

MR. PRESIDENT AND GENTLEMEN:—It is not my purpose, neither is it desirable to enter into a detailed history of the operation for the cure of vesico-vaginal fistula. However, a brief allusion to some of the most salient points in Dr. Sims' operation, together with a notice of some important modifications of the operation as now performed by Prof. Simon, of Heidelberg, will help to a better understanding of the case reported to you this evening.

Previous to 1852, for centuries there had been a persistent effort on the part of surgeons to effect a permanent cure of this distressing malady, but without success. In that year Dr. Sims first reported several successful cases, and minutely detailed the

method by which he had achieved his success. According to Thomas, the three particulars wherein he claimed especial originality were these: 1st. A method by which the vagina could be distended and explored, which is best accomplished by the aid of Sims' speculum. 2d. A suture not liable to excite inflammation or ulceration, that is the silver suture. 3d. A method of keeping the bladder empty during the process of cure, which Sims' self-retaining sigmoid catheter enables us to do.

Gosset, in England, in 1834, had combined exactly these three essentials to success, and twelve years afterwards Metzler, in Germany, used like measures for the cure of these fistulæ, but neither impressed their importance on the minds of the profession at large so as to make them available for the relief of the afflicted.

In performing the operation, Sims advises great care in paring the edges of the fistula and in passing the sutures so as to avoid the mucous membrane of the bladder. In the after treatment, likewise, he insists on the necessity of keeping the bladder empty, and for this purpose retains the sigmoid catheter permanently in that viscus. The patient is almost immovably confined in bed, and the bowels are constipated with opium until the cure is complete, or failure results.

Prof. Simon on the other hand, has done much to simplify the operation for vesico-vaginal fistula, and has shorn it of many tedious little details which Dr. Sims requires of both operator and nurse. First, in paring the edges of the fistula, and in passing the sutures, he does *not* avoid the mucous membrane of the bladder, but cuts away all cicatricial tissue even if it considerably enlarges the opening. He claims that the edges thus prepared are more liable to unite than when bevelled as advocated by Sims. Moreover, should a second operation be necessary, it would be more likely to succeed with the thick, square edges than with the thin, bevelled edges which would have to be

pared down still more to afford a raw surface for union. Neither, in his opinion, is catarrh more likely to follow this form of incision than any other.

His after-treatment, likewise, is radically opposed to that pursued by Sims, and is based upon the following deductions. He says: 1st. From a series of observations, I conclude that neither on the wound, nor on the new cicatrix, does the urine have any injurious influence, and neither hinders the union by primary intention nor loosens a once formed cicatrix.

2d. From a second series of observations, I have learned that the healing is not interfered with by a degree of distension which could come in a normal filling of the bladder, provided only that the wound is perfectly freshened and united.

In most cases the permanent retention of the catheter only does harm.

Accordingly, Prof. Simon does not confine his patient in bed in an almost immovable position, but allows her to recline in any posture that she finds most comfortable, and to pass her water as inclination prompts. Sometimes it is drawn every three or four hours. The chief care is to prevent over-distension of the bladder and to keep the evacuations from the bowels in a liquid or semi-liquid condition, to prevent straining at stool.

With this passing notice of the methods of the two men who have done more than any others to make this operation a successful one, we go on to the relation of the following case, giving some details of previous history, that the causes which conspired to bring our patient into her helpless condition may be fully understood :

On the 14th of February, 1875, I attended Mrs. R——, in her fourth confinement. I was sent for in haste, at six o'clock in the morning, and was informed by the messenger that the membranes had broken and that labor was rapidly progressing. However, on reaching the house I found no evidence to show

that the waters had escaped in any considerable quantity, and on making a vaginal examination, the os was found high in the pelvis, beyond the reach of the finger. Labor progressed very slowly, so that it was four p. m. before the head had advanced sufficiently to enable me to make out that it presented in the third position, the forehead lying toward the left ilio-pectinael eminence. The conjugate diauneter of the pelvis was considerably shortened, and the sacral curve was very short. The os was not yet fully dilated, and nothing was done except the giving of an opiate which afforded several hours refreshing repose. Between eight and nine p. m. labor began again and went forward steadily. There was no gush of waters, but they were continually dribbling away. The pains were very regular and tolerably strong, but not too vigorous. Between one and two o'clock on the morning of the 15th, the woman's condition being still, in every respect, excellent, as a scarcely perceptible advance had taken place, the head still lying in the superior strait, I endeavored to hasten delivery by the aid of the forceps, but did not succeed in accomplishing anything. In this extremity I called in Dr. G. A. Foster, who reached the house at about eight o'clock in the morning. He at once proceeded to apply the forceps, which he found a difficult operation, and a half hour was consumed before they were finally adjusted and locked. Powerful traction was necessary to bring the head down on the perinæum, and we took several turns at the handles of the instrument., each one laying out his full strength in assisting the expulsive efforts, before this was accomplished. Final delivery of a dead male child was effected at about nine o'clock.

No untoward symptoms were manifested on the part of the mother during child-bed, and she had been up some when I was informed, on the fifteenth day after delivery, that there had been a constant and involuntary loss of urine during the preceding twenty-four hours. Believing the cause to be paralysis of

the sphincter of the bladder, as the result of the pressure to which the parts had been subjected, I prescribed iron, quinine and strychnine, and likewise employed electricity with apparent partial success for the next three weeks. At the end of that time, as the patient's general health was good, I ceased making visits, hoping that time would complete a cure which seemed to have been begun. I had suspected the existence of a vesico-vaginal fistula, and had made an examination by simply injecting indigo water into the bladder and watching for its escape from the vagina, but with negative results. As the subsequent history of the case showed that a fistula actually existed, I can account for the seeming success of my medication only on the supposition that with the first separation of the slough all the urine escaped by the artificial opening, but that its subsequent cicatrization and contraction enabled the patient to retain her urine for a short time, thus leading me to the belief that the tonicity of the sphincter was increasing.

It was more than two months afterwards when I was sent for to again attend Mrs. R—. When I met her she told me a doleful story. Her difficulty had not grown less since I had last seen her, but its consequence had become tenfold worse. The constant dripping of the urine kept her clothes always wet and extremely uncomfortable, while the external genitals and the thighs were so excoriated and sensitive that she could walk only with great difficulty. The ever present annoyance and distress were so extreme that her health was considerably impaired and her mind much depressed with the fear that she could never be cured. In a burst of tears she declared that she would rather die than live longer in her present condition. I immediately determined to make a thorough examination for fistula, and encouraged my patient with the hope of a speedy cure, if one were found. She eagerly consented to anything that promised relief, and on the 17th of June, with the aid of Dr. Leonard,

an examination was accordingly made. On exposing the anterior wall of the vagina and neck of the womb with Sims' speculum, the anterior lip of the cervix was observed to be deeply fissured and seemingly one mass of granulations, up through which welled the indigo water that was injected into the bladder. The patient was too nervous and sensitive to endure the examination long enough to fix the exact point of the lesion which was thought to involve the cervix. A subsequent examination, under chloroform, showed that the false passage was a simple vesico-vaginal fistula between the base of the bladder and the anterior *cul-de-sac* of the vagina. It passed obliquely upwards and backwards from the bladder, and opened four or five lines below the junction of the uterine and vaginal mucous membrane, and was large enough to admit the uterine sound.

The patient was at once put on a course of treatment preparatory to an operation. Iron and quinine were prescribed for internal use, and to reduce the local congestion and irritation, she was directed to pass a pledget of cotton, saturated with glycerine, every other day, and to use the hot water douche twice daily. Both the local and general treatment produced excellent results.

On the second of July the operation was performed, Drs. Farrand and Foster, and Mr. Gaily, a student in the office of the former, assisting. The patient was placed on a table in front of a window, in Sims' position for vaginal examination. Chloroform was administered, and the fistula exposed to view with Sims' speculum. It was then caught and drawn down with a long tenaculum, the mucous membrane was transfixed with the long bistoury especially made for this purpose, at a distance of three or four lines from the border of the opening, no pains being taken to avoid the membrane of the bladder, and as large a portion as possible of a complete ring of tissue removed at

once. What remained was clipped away with the bistoury and Emmett's curved scissors. Three silver sutures were passed and secured by torsion, the vagina and bladder were washed out, the patient was placed in bed, and a full dose of morphine administered. Next day I found the patient very nervous and a good deal of water escaping by the vagina. But on the fifth day after the operation there was so little that the patient was not conscious of it, and thought she was cured. On the eighth day an examination was made, with the intention of removing the stitches, but a very slight leakage appearing on injecting the bladder with indigo water, they were left a week longer. When they were finally removed, on the fifteenth day, not a drop of fluid appeared in the vagina after using the usual injection of blue water. Thus far the operation was a success, but chloroform was administered when the sutures were taken out, and the patient vomited violently when she recovered from her narcosis. Not much was thought of this at the time, and I was therefore greatly disappointed to learn, the second day after this, that the leakage was as bad as ever. Without doubt, the violent retching that followed the inhalation of chloroform two days before, had ruptured the cicatrix so recently formed, and the further percolation of urine through the rent had opened it to its fullest extent. Nothing remained but to repeat the operation, which was done about five weeks after. It differed from the first chiefly in the manner of passing the sutures. Some difficulty had been experienced in manipulating the needles with Sims' needle-holder, and two were broken in taking the stitches so high up in the vagina. At the suggestion of Dr. Foster, I procured a needle attached to and made from the same piece as the shaft, but bent at a right angle to it, and then curved on itself nearly to a semi-circle. The shaft and handle were eight inches long, and an eye near the point of the needle received the silver wire employed as a suture. With this instrument there was no risk of the needle

turning in the holder and appearing at some point where least expected or desired. With its aid five sutures were passed from side to side and secured as before. In the after-treatment the woman was kept in the abdominal position when in bed, and her water was drawn every two hours for two or three days. She was then allowed to urinate naturally, and to sit up for a little while immediately afterward, if she so desired. After eight or ten days she attended to some light domestic duties. There was a slight leakage at first, but this soon disappeared, and at the end of two weeks the sutures were removed without the aid of chloroform. No untoward accident followed, and she was dismissed completely cured.

There are several points of interest connected with this case, of which we may mention, first: the long period that elapsed, two weeks, before the lesion resulting in fistula became manifest. The involuntary escape of urine usually occurs within three or four days. Still, cases are mentioned by Thomas in which the fistula did not appear until from the twenty-first to the thirty-first day after delivery. Second, the great advantage of retaining the stitches in place for a comparatively long time. Sims says that it is of no use to leave them in after the eighth day, but others advise their retention for a longer time.

It was conclusively shown, in this case, that the inflammatory processes were kept up some time longer than eight days, for the leakage that was quite apparent on that day had entirely disappeared on the fifteenth; and I firmly believe that had it not been for the accident which followed chloroformization, when the stitches were removed, complete cure would have resulted from the first operation. Under similar circumstances again, I should not remove the stitches even at the end of two weeks, if there was the slightest evidence that reparative processes were still going on.

**CASES OCCURRING AT PROFESSOR MACLEAN'S CLINIQUE,
UNIVERSITY OF MICHIGAN—From the Graduation Thesis of
J. M. LEWIS, M. D., Class of '76.**

SALIVARY FISTULA.—J. S., æt. 60., from Pinckney, Mich., appeared at the clinique October 20, 1875, complaining of a constant discharge of saliva from a fistula communicating with Steno's duct.

The fistula was the result of the destruction of tissue by an escharotic plaster which had been applied by a female quack for the removal of an ordinary parotid tumour. The profuse discharge was a source of great annoyance; moreover, the loss of the secretion had seriously impaired the digestive function.

Prof. Maclean described several methods of treatment, all of which he said were uncertain in their effect.

The one which he preferred to try in the first place was the following :

The external opening of the fistula was slightly enlarged by a sharp pointed knife, so as to permit a common silver probe to be passed through it into the duct, and along this into the mouth. A small silk seton was then attached to the end of the probe and gently made to follow the probe into the duct, and through into the mouth. The two ends of the seton were then tied together with the view of avoiding displacement, and the patient was requested to report progress.

October 30. The patient again presented himself at the clinique, and stated confidently that the seton had, to a great extent, effected the return of the saliva into its proper channel. There was still, however, some discharge externally. The seton was removed, and the small external aperture of the fistula was touched firmly with a red-hot iron wire.

Under date of February 26th, this patient wrote to Prof. Maclean, stating that the application of the actual cautery had ended his trouble at once, and that his gratitude was consequently profound.

ADENOID TUMOUR.—M. S., æt. 30, from Chelsea, Mich., applied at the Clinique, October 23rd, 1875, on account of a tu-

mour, as large as a goose egg, situated in the superior carotid triangle. General health good. The tumour had grown gradually and without pain. Counter irritation had been used locally by her family physician, and iodide of potassium given internally, but without any effect.

The Professor directed attention to the important anatomical relations of the tumour. The external carotid artery lay over its anterior margin, the external jugular vein passed over its posterior margin, and the sterno-cleido mastoid muscle lay over the tumour between these two vessels. The tumour, however, was well defined and movable, and its removal was unhesitatingly recommended and at once performed.

An incision was made longitudinally from the upper to the lower margin of the tumour right down through the membranous sac in which it was contained, and the whole growth was rapidly turned out without injury to any of the important structures which lay over and around it. The after-treatment of the case was conducted in private, but from time to time the patient's condition was reported to the class, and although the operation was followed by severe constitutional disturbance, the pulse varying from 90 to 140, with great swelling of the neck, and burrowing of pus in the deep cervical fascia, and symptoms of septicæmia, still complete recovery ultimately took place, so that in six weeks from the date of the operation the patient was presented before the class in perfect health, with only a slight scar where the tumour had formerly existed.

CHRONIC SYNOVITIS OF THE KNEE JOINT.—A. J., æt. 12, from Canada, appeared at the Clinique, Nov. 13th, 1875, by request of the Professor, for the purpose of illustrating the result of treatment.

History—Patient's health had been good up to eighteen months ago. At that time, while playing with pieces of glass, one was driven into the tissues in the neighborhood of the right knee joint. Inflammation immediately followed, with intense swelling of the joint.

The surgeons to whom his friends applied for advice at the

time recommended lotions of acetate of lead and opium, and afterwards counter-irritation with fly blisters, and these were applied with but little or no benefit.

Patient then came to Ann Arbor, and a physician applied ice locally, but with no beneficial effect, but rather the contrary.

One year ago he first applied to Prof. Maclean, who found him unable to move except with crutches, and his general health very much reduced.

The knee-joint was much swollen and deformed, and filled with fluid, and the whole limb atrophied.

The treatment recommended at that time, and which had been maintained until about a month ago, consisted in the application of a plaster of Paris cast to the joint, and the administration of tonics internally.

The patient now looks fat and ruddy, and walks without a limp or complaint of any kind.

The Professor remarked that an important fact in the family history of this case is that his father has been for some time past an inmate of an inebrate asylum.

March 31st, 1876. This patient has continued quite well up to this time, and has had no treatment, either medical or surgical, for seven months.

NOTE—This case will serve as a good illustration of a considerable number of cases of chronic articular disease in which this method of securing rest and uniform pressure was adopted, and in which similar results were obtained.

4 *CLINICAL LECTURE ON PARESIS, OR FAILURE OF MUSCULAR POWER.—(Fourth Lecture.)—By A. B. PALMER, M. D., Prof. of Pathology and Practice of Medicine in the Department of Medicine and Surgery of the University of Michigan.*

GENTLEMEN.—On the present occasion I wish to call your attention, briefly, to some therapeutical principles applicable to the various conditions of paresis we have had under our notice.

As paralysis is a symptom depending on so many different

pathological lesions—lesions of various kinds in the nerve centres, either in the brain or spinal cord, or in the course of the nerves, or even in the muscles themselves, it is obvious that in rational treatment, the first thing is to consider the seat and character of the lesion, as our remedies should be addressed to such lesion rather than to the mere symptom or the result of such lesion. I repeat the word *lesion*, as this is what is to be sought for, carefully studied, and constantly borne in mind. When a clear diagnosis is made, the work of the physician is far advanced; for although the great aim of medicine is to relieve suffering, remedy defects and remove diseases; yet these objects cannot be accomplished with any degree of certainty without understanding the immediate causes of the phenomena we desire to remedy—without understanding the nature of the diseases we have to treat. The charlatan prescribes for diseases of which he knows, and seeks to know, nothing definitely, remedies of the nature and action of which he is also ignorant; while every physician worthy of the name, though his knowledge in particular cases may be imperfect, at least seeks with eagerness to understand the full nature of his diseases, and to prescribe remedies whose known effects have some rational connection with the morbid conditions he endeavors to correct.

As is the case with various other affections, there are some cases of paralysis entirely beyond the reach of any remedies of which we have now, or ever expect to have, knowledge. It is important to distinguish these, and desist from the use of means which can do no good and may do harm. When a portion of the brain, or spinal cord, or nerve is positively destroyed, and beyond restoration, no active measures are called for as nothing can be of real avail; but when such destruction has not occurred, and when pathological conditions are present which may disappear, then the resources of art must be invoked to aid nature in her efforts to restore health. When paralysis depends upon a poison in the system, that poison, if possible, must be antidoted or removed. When dependent upon a physical injury, nature must be aided as far as possible to repair that injury. When depend-

ent upon inflammation, that inflammation must, if possible, be subdued. If dependent upon anæmia and failure of action, the blood, as far as may be, must be increased and the failing action excited. If dependent upon tumors, sclerosis, softening, degeneration or any slow and obscure forms of structural change, we may not be able to reach such cases, but we should at least endeavor to do no harm. We may, in these cases, try the effect of that great modifier of various nutritive changes—iodide of potassium, and meet by appropriate remedies such general or special conditions as may be present, awaiting results.

If dependent upon reflex action from some peripheral irritation, such irritation must be removed. In the same manner all causes of the phenomena are to receive the chief attention. The two most important conditions of the brain and spinal cord to be distinguished from each other, as bearing upon treatment, is that of inflammation and hyperæmia on the one hand, and anæmia, atrophy, exhaustion and degeneration on the other. If inflammation, hyperæmia and irritation be present, there will be early rigidity and fever, and if of the spinal cord, often tenderness, and generally pain, and marked susceptibility to electricity; and the proper remedies would be such as would abate inflammation and hyperæmia and soothe irritation. The particular remedies suggested are cupping, bromide of potassium, belladonna, ergot, possibly mercury, counter-irritation and iodide of potassium, and cathartics and diuretics might be required. The details of the particular mode of using these different agents I shall not now attempt to describe. The present object is to suggest therapeutical principles rather than full special procedures.

If the opposite condition, of anæmia, atrophy, exhaustion and degeneration be present, a generous diet and tonics, such as quinine, iron, strychnine, opium, etc., will be demanded, and according to Brown-Sequard, iodide of potassium here also.

The bowels, bladder and secretions generally will require attention; and bathing, frictions and general hygienic measures will be important.

In paraplegia from disease of the cord, sloughing of the sacrum is apt to occur. This must be prevented by great care, perfect cleanliness, the use of air or water cushions to take the pressure from the parts most liable to be affected, and where sloughing occurs, ice may be applied to the spine for ten minutes, alternated with a warm poultice for three hours ; and there must be proper dressings to the slough or ulcer according to its conditions.

The use of electricity and galvanism in the treatment of paralysis is often resorted to and is sometimes very beneficial. It will be impossible, in this lecture, to go fully into this subject, and I must content myself with stating some general principles and rules which must govern the use of this remedy. In the first place, it must be remembered that this agent is a powerful stimulant and excitant, and is therefore in danger of doing harm when used in conditions of active excitement and irritation. In recent cases of paralysis arising from cerebral or spinal haemorrhage, followed, as such condition usually is, by more or less inflammation, electrical excitement is inapplicable. The same is true with regard to strychnia ; and yet these agents are sometimes resorted to in the earlier stages of such cases. They are applicable only when the stage of excitement has passed by, and are more particularly useful when the original lesion is removed or in a passive state, and when from disease the nerves and muscles are inactive.

Dr. G. V. Poore, of Charing Cross Hospital, London, referred to in a former lecture, has given some rules for the use of electricity and galvanism, which seem to me founded upon correct pathological principles, and which I will endeavor to epitomize.

1. If paralysis to the will remain absolute—no voluntary effort whatever being produced on the muscles, and yet they respond perfectly to electricity, no material good can be expected from perseverance with it.

2. If paralysis to the will remain absolute while response to electricity is diminished, the electricity is likely to be useful in helping to improve the nutrition of the muscles, and in tending

to restore normal irritability. When this object is accomplished and the paralysis to the will is still absolute, the electricity may be discontinued, as it will be of no use. When irritability and nutrition are diminished from want of use, then electricity should be continued. It may effect restoration of power.

In relation to this subject nothing can be more judicious than Dr. Watson's advice: "Our aim should be to preserve the muscular part of the locomotive apparatus in a state of health and readiness, until, peradventure, that portion of the brain from which volition proceeds, having recovered its function, or the road by which its messages travel (through the cord and nerves), having been repaired, the influence of the will shall again reach and reanimate the palsied limbs." Electricity, strychnia, friction, succussion and passive motion are the best means for keeping up the nutrition of the muscles when deprived of the stimulus of the will.

3. Whenever we meet with the *degenerative reactions* in peripheral paralysis (referred to in a former lecture), we should employ *galvanism* perseveringly and doggedly, as it may be rewarded by the gradual return of muscular irritability.

4. If the irritability to both forms of current has completely disappeared, we are not justified in continuing too long or holding out delusive hopes. A fair trial, however, is proper.

5. Efforts with electricity are most successful where the pathological lesion has been removed, and where its effects only remain, or where we may prevent the effects which are most likely to follow from disuse or from deficient nutrition.

6. Hysterical paralysis is especially susceptible to electrical treatment, speedy and striking effects being often produced; but here strong mental impressions may appear quite as miraculous.

In any of the cases, however, electricity may fail, or benefit the patient up to a certain point only, and its excessive or injudicious use may, in any case, do much harm. Wherever the paralysis depends upon a structural lesion of nerve centres or nerves, nothing will avail in restoring power to the muscles until

that lesion is removed. If incapable of removal the paralysis will be permanent.

It will be seen that in treating paralysis with electricity, as with other remedies, an exact diagnosis is important, and the prognosis will depend upon the possibility of removing the more essential pathological conditions.

For the particular manner of using electricity, the kind, strength, frequency and continuance of the current, etc., in different cases, and the best instruments for its production, I must refer you, for the present, to the chair of *Materia Medica* and the special works upon the subject.

The work most accessible, and as well adapted to the wants of the student and practitioner as any other, is that of Beard and Rockwell. But in studying this or any other work on a specialty in therapeutics, due allowance must be made for the enthusiasm which devotion to such specialty is apt to excite, and the coloring which such enthusiasm is apt to give to the treatment of the subject.

Electricity is doubtless a valuable agent in many cases, but, like every other powerful remedy, it must be used with as full knowledge as possible of its powers, and with discrimination and skill adapting it to each case.

In conclusion, let me warn you against its hasty, indiscriminate, rude and unscientific use, and against making a hobby of this or any other therapeutical agent.

Proceedings of Societies.

THE ST. CLAIR, SANILAC AND LAPEER COUNTY MEDICAL SOCIETY

Held its quarterly meeting in Port Huron on the 24th of February, 1876. Present, Dr. Mills, Vice-President, in the chair, Drs. Stockwell, Kibbie, Tibball, Spencer, Shoebottom, Northrup, Maxfield, Baily, McLain, Pousette and Nash.

Minutes read and approved.

Reports of standing committees called for, but none responded.

On motion, Dr. Stockwell's paper on puerperal convulsions was called for. The ætiology of the disease was very fully and ably presented, in which he adduced the opinions of the leading authorities in this and foreign countries, on this obscure subject. He recognizes three varieties of puerperal convulsions, 1st, apoplectic; 2d, hysterical; 3d, epileptic, and deems it of the first importance to distinguish the variety before we decide upon any course of treatment in a given case. Condemns in emphatic terms the absurdity of a physician falling into a routine plan of treatment.

The Doctor inclines to the belief that the wonderful changes which pregnancy induces, such as increased nerve force, disturbance in nutrition, hepatic and renal congestion from pressure of the gravid uterus, and lastly, though not least, the various depressing influences of the mind which this class of patients are very generally subject to, are all among the predisposing causes of this disease. Having once satisfactorily decided upon the particular form of eclampsia, its appropriate treatment is clearly indicated. The first variety, or apoplectic, occurring in subjects of firm muscular texture and full habit, calls for prompt and free depletion with the lancet, with other sedative measures. The second, or hysterical variety, suggests anti-spasmodics, which would also be indicated in the third variety, together with ergot, and all suitable means favoring the early completion of labor. But the only sure road to success in the treatment of puerperal convulsions is not so much in combatting the more apparent symptoms as in early recognizing the primary cause of the disease.

At the conclusion of this paper, the Society adjourned for dinner, to meet at 1.30 p.m. On reassembling, the discussion of Dr. Stockwell's paper was opened by remarks from Dr. Shoebotham, who assented in the main to the views set forth in the paper read, confining his remarks mainly to his own observations

in this direction ; favors blood-letting, and extols the use of large doses of strychnia ; has given it in $\frac{1}{4}$ grain doses, repeated every three hours, for four successive doses, without obtaining the slightest indication of its ordinary specific action ; he continues its use in diminished doses after the first day.

Dr. Maxfield related his experience of a case of puerperal convulsions occurring in a confirmed epileptic, showing this peculiarity, that from the commencement of pregnancy her epilepsy always ceased till about the close of gestation, or till the commencement of labor, when they invariably recur, and last with great severity till the termination of labor. During lactation they are very light, scarcely perceptible. Offspring show no indications of epilepsy.

Dr. Northrup considers it dependent upon some specific poison, entirely different in its manifestation from any other disease ; has treated six cases, three of whom died. They all occurred during the first few years of his practice ; has seen nothing of it of late years. He thinks there is some atmospheric influence, operating at certain times and places, and then leaving the locality entirely free from the poison.

Dr. McLain, of Sarnia, related his experience in one case which was an epileptic, showing the same peculiarities as Dr. Maxfield's case, viz, complete immunity from the disease during the period of gestation. Always bleeds in true eclampsia ; for the epileptic variety, uses Chl. Hydrate freely, and follows out general indications.

Dr. Pousette, also from Sarnia, regarded it a specific disease ; has had five cases of eclampsia, three of whom recovered ; these were bled freely, and he thinks with marked benefit.

On motion, the names of Dr. Whitney and Dr. Merritt which were presented for membership, were referred to the Committee on Admission.

The Committee on Publication reported in favor of publishing in the PENINSULAR JOURNAL the paper "On some of the causes which lead to the development of Phthisis," read by Dr. McColl at the last meeting, and also the one just read by Dr. Stockwell on "Puerperal Convulsions."

Dr. Stockwell moved to ask the Publishing Committee to bring up the transactions of the Society from the year 1871 to date, as they should find their funds adequate to the task.

Dr. Maxfield preferred charges in writing against Dr. J. G. Baily, of Port Huron, for grossly violating the code of medical ethics, recognized and adopted by this Society and all other medical societies in good standing in the United States, which charges were, on motion, referred to the Committee on Medical Ethics, with instructions to investigate and report on said case at the next quarterly meeting.

On motion, Dr. Mills was requested to prepare a paper on Diphtheria, for presentation at the next meeting.

Moved and carried that the meeting adjourn, to meet in La-peer on call of the President, in May.

A. NASH,
Secretary.

REPORT OF THE BERRIEN CO. MEDICAL SOCIETY.

The second annual meeting of the Berrien County Medical Society convened at Benton Harbor, February 9th, 1876, at 2 o'clock P. M.

President Dr. John Bell in the chair.

The following members were present.—Drs. Stratton, Neal, **B**owman, G. M. Bell, Blawis, and Dunning.

Minutes of the last meeting were read and approved.

The name of Dr. J. R. Dunning, of Benton Harbor, being proposed for membership, the committee on admission reported unfavorably, and the report was adopted, after discussion.

A paper on typhoid fever, by Dr. Greenamyer, was read by the Secretary. In the discussion which followed all members of the society participated.

Dr. Neal read a paper on mercury, in which he contended that the ideas advanced by Dr. Hughes Bennett were those accepted by the most recent authorities.

Dr. Scott opened the discussion, and was followed by Drs. Bell, **B**owman and Stratton.

The society proceeded to the election of officers for the ensuing year, with the following result:

President, Dr. L. H. Dunning, New Troy; 1st Vice President, Dr. Robert Stratton, St. Joseph; 2d Vice President, Dr. Wm. A. Neal, Dayton; Secretary, Dr. G. M. Bell, Benton Harbor; Treasurer, Dr. J. D. Bowman, Millburgh.

Upon motion, the society adjourned till 7:30 o'clock, P. M.

EVENING SESSION.

The society was called to order by the president at 7:30 o'clock.

Dr. Robert R. Lawrence was brought forward, as a candidate for membership, by Dr. John Bell, and, upon motion of Dr. Scott, he was admitted.

The secretary reported that, exclusive of those admitted to membership this session, there are twenty-two (22) members of this society. One member, Dr. J. D. Greenamyer, has removed from the county during the year.

Dr. Stratton read an interesting paper upon epidemic, endemic and prevailing diseases in the county during the year 1875. He also read histories of three cases, one of which upon *post mortem* revealed an atheromatous condition of the semi-lunar valves of the aorta. 2d. A case of confinement in which the labor was retarded by the presence of a fibroid tumor. The tumor was interstitial, located in the anterior wall of the uterus, and extended down to within one inch of the os externum. The patient, a multipara, passed safely through labor without an accident. 3d. A case of malignant tumor, which was located in the frontal region, just over the eye-brow—the tumor soft, nodulated, and was, upon *post mortem* examination, found to be external to the plate of bone. The bone was thickened and softened, and infiltrated with a mass similar to that composing the mass of the tumor.

Dr. Neal reported four cases of pneumonia treated successful~~ly~~ by the "German method," which consists in the administration~~in~~ of large doses of quinine given during the intermission of fever~~say~~, say from fifteen to twenty grain doses. He expressed himself~~as~~ being well pleased with the result of his experience in the~~as~~

cases. In one case the disease seems to have been abated, and in the other three instances cut short.

The president, Dr. John Bell, called Dr. Scott to the chair, and then proceeded to deliver his address. Subject—"Homœopathy in the University of Michigan."

The paper, in a candid manner, discussed the history, claims and actual results of this professed system of medical practice. It claimed homœopathy to be a topic of great public concern; that the pretensions of those who professedly practice under this dogma are destructive to public health, both physical and moral, and hence injurious to the best interests of society. It gave a concise statement of the status of homœopathy, and presented a number of illustrations to show its striking absurdities, and some of its many errors, all of which are patent to the intelligent physician. It claimed that our State University and the interests of the people had been greatly imposed upon by the act of the Legislature by which a professorship of homœopathy had been unjustly established under State patronage. The duty of the regular profession, under the circumstances, was strongly presented, and the views expressed were very favorably received.

The paper was one that should command very general attention.

Dr. John Bell was selected to prepare a paper for the next regular meeting, on "epidemic, endemic and prevailing diseases."

The following delegates were elected to the American Medical Association:—Drs. L. H. Dunning, Alex. H. Scott and Robert Stratton. To the State Medical Society:—Drs. Ryno, Bowman, Smith, G. M. Bell and Wm. A. Neal.

Dr. Stratton moved that the next meeting of this society be held at Berrien Springs. Carried.

Society adjourned.

GEO. M. BELL, *Secretary.*

L. H. DUNNING, *President.*

Correspondence.

RESOLUTIONS ON HOMŒOPATHY.

JACKSON, March 20, 1876.

EDITOR PENINSULAR JOURNAL OF MEDICINE—*Sir*:—I have been instructed by the Jackson County Medical Society to transmit to you, for publication, the following copy of resolutions on the subject of Homœopathy in the University, adopted by an unanimous vote at the March meeting of the Society:

Resolved, That, while we do not deny the right of the State Legislature to authorize the establishment of a distinct homœopathic medical college, under the auspices of the State University, we deplore and condemn the action of the Regents in establishing the present homœopathic dependency on the medical department, and further,

Resolved, That we do not endorse the present position of the regular medical faculty in relation to this subject, but believe they should have either resigned their chairs or retained them under such a public protest as would have testified their regard for medical ethics, and placed themselves right in the eyes of the profession of the country.

Very respectfully yours,

C. H. LEWIS, *Secretary*.

ANOTHER COUNTY HEARD FROM.

J. J. MULHERON, M. D.—*Dear Sir*—As a mourner for the “Medical Department of Michigan University,” I beg of you to write and cause to be printed a suitable obituary of the institution, which was entirely annihilated by a set of resolutions passed by three doctors, one student and one traveling dentist, against two other doctors, the seven constituting meeting of the “Northeastern Indiana Medical Society,” at Angola, St. John Co., during the terrific storm of the 28th ult.

The sad fate of Michigan, to be thus so summarily executed, so effects me that I am unable to fine appropriate language.

Very respectfully, etc.,

MISERABLY DISCONSOLATE.

APRIL 1st, 1876.

QUININE.

EDITOR JOURNAL—Can you inform me why the physicians of Michigan will persistently mispronounce the common word q-u-i-n-i-n-e? I do not recollect hearing it pronounced once rightly since I have been in the State. It is always *qui-neen'*, so far as I have heard, and always wrong when so pronounced. The laity are so accustomed to hear the word *qui-neened'* by the profession, that they daily *qui-neen'* it in my ears. Can't there be a stop put to it some way? It is a perfect murdering of Peruvian (Indian) or Latin to so pronounce it. It should be either *qui"* (long *i*) *nine'* (long *i*), or else *qui'-nine"* (long *i*.)

Yours for unsophisticated qui-nine,

C. H. L.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

THE COMPARATIVE EFFECTS OF METHYL, AMYL AND OTHER ALCOHOLS.

A very interesting question in chemico-therapeutics, and one which has received little investigation, is this: what are the comparative physiological effects of the first five alcohols of the ethylic series? These bodies have, respectively, 1, 2, 3, 4 and 5 atoms of carbon; 4, 6, 8, 10 and 12 atoms of hydrogen, and, each, 1 atom of oxygen, in the molecule. They appear physically related to each other as follows:

1, methyl-alcohol ; vapor density, 16; boil at 140°; sol. in all propor. water.
2, ethyl " " " 23 " 172°; sol. in all propor. water.
3, propyl " " " 30 " 205°; soluble in water.
4, butyl " " " 37 " 230°; sol. in 10 parts water.
5, amyl " " " 44 " 270°; sol. in 40 parts water.

The *first*, methyl alcohol or wood spirit, or wood naptha, is obtained by the destructive distillation of wood, and in an impure state is extensively used for mechanical purposes. It never occurs in any fermentation and cannot appear as an original impurity in alcoholic liquors, but, as the "methylated spirit" it has been added in the falsification of liquors in Great Britain, and this fact has given rise to a popular fancy that "naptha" or "benzine" was put into alcoholic beverages. "Methylated spirit," one-ninth methyl alcohol, duty free for the arts, and contraband as a beverage in England, as found in the market has a harsh, sharp, and smoky odor and taste, but pure methyl alcohol has an aromatic odor, free from empyreuma, and a sharp but not acrid taste. The *fifth*, amyl alcohol, constitutes the chief part of fusel-oil, which also contains the fourth alcohol and traces of the third, and these together appear quite invariably in the alcoholic fermentation of sugar—their proportion being varied by conditions. Pure amyl alcohol has a sweetish, heavily ethereal odor, and it can hardly be smelled without coughing a few moments afterward. Its taste is burning and painful. In fusel-oils, the odor is more irritating from presence of variable proportions of the acids formed by oxidation of the alcohols, and in aged fusel-oils the odor is modified farther by the heavily fruity and stupefying smell of the ethers formed by these acids.

Of the five alcohols named, three are *in use by man*. Ethylic alcohol is the chief and controlling constituent of all the alcoholic beverages, and these have been so long and so widely under trial before the world that, the common unprofessional observer can judge (about as well as anybody), of their final physiological effects. But the question, how far are the observed effects of alcoholic beverages due to substances other than

ethyl alcohol, is left to analysis and to therapeutics. Now it is well enough shown that, in common alcoholic liquors of any kind or grade, beside ethyl alcohol and water, there are no very influential substances present in appreciably potent quantities, unless it be the fusel-oil. We except the water, because the effect of dilution is influential to an extent which is, we think, generally under-estimated. The action of fusel-oil itself—the great and naturally occurring impurity of liquors—is an important question which has received the labor of but a few investigators.

The observations as to the *comparative effect of methyl, butyl and amyl alcohols*, made recently by Dr. B. W. Richardson of London, and given to the public last year in his Cantor lectures, seem to be of great interest and importance. Dr. Richardson's experiments seem to show that the physiological effects of the first five alcohols differ from each other in a *gradation* as regular as that of their composition and physical properties. His investigations into the action of methyl alcohol is of immediate importance (1) as giving support to the gradation theory just named, (2) as suggesting certain medical uses for strictly pure wood spirit, (3) as informing us that adulteration of alcoholic beverages with methylated spirit may be less dangerous to the consumer than has been supposed.

Dr. Richardson observed the *action of methyl alcohol* upon animals in numerous cases, in one instance of its accidental excessive administration to the human subject, and he reports a few cases of its use as a stimulant. With continued administration, there is, first, nervous excitement and quickened circulation; second, muscular prostration and other signs of common intoxication; third, entire intoxication and insensibility; fourth, death. The temperature steadily falls,—in animals he has seen a final loss of 8° F.,—but there are no tremors or convulsive actions. If the administration be stopped at the third stage, recovery soon commences, progresses quietly, and after six or seven hours becomes complete. “Methylic alcohol is much more rapid in its action and much less prolonged in its effects

than common alcohol." Of the alcohols of its series, "it demands the least possible ultimate expenditure of animal force for its elimination from the body." "In the end, all of these alcoholic fluids are depressants." A prominent physician had for years taken methyl alcohol, instead of ethyl alcohol, as less injurious, and Dr. Richardson says he has himself, of late years, when compelled to allow the administration of alcohol in some form, recommended this lighter spirit and with better results than follow ethyl alcohol.

The manufacture of methyl alcohol, pure enough for administration, has not been called out. It is highly probable that the article could be furnished at a moderate price, if its manufacture should be demanded. It must needs be wholly freed from the wood-tar constituents held in solution in the ordinary wood naphta. Its synthesis from inorganic sources is so readily effected, that it would not be strange if it should yet be manufactured pure from inorganic materials, for the market. Who can say that the next generation will not witness the manufacture of methyl alcohol from marsh gas or carbon disulphide and its pharmacopoeial use for tinctures and the making of extracts?

The action of butylic and amylic alcohols (the fourth and fifth) was reported upon in 1870 by Rabuteau, in effect that butyl alcohol produced the results of five times its concentration, and amyl alcohol the results of fifteen times its concentration of ethyl alcohol. The information which Dr. Richardson reports is more explicit. He states that, after administration of butyl alcohol, the four stages of action appear, as in case of methyl and amyl alcohols, but each stage is of much longer duration. In the third stage, distinct tremors pass through the muscular system. The tremors recur at regular intervals while the subject is undisturbed, but are excited by a touch at any time. The recovery requires about thirty-six hours. The action of amyl alcohol is that of butyl alcohol intensified. In the third stage, there is profound coma, reduction of temperature, and very pronounced tremors. The tremors recur regularly unless excited by external disturbance. The recovery requires sometimes two

or three days, the restoration of temperature taking longest. External heat must be applied. The tremors produced by a single full administration of the alcohols, Dr. Richardson states, are identical with those of delirium tremens, from long use of ethyl alcohol. Strong butyl alcohol produces numbness in parts to which it is applied, and may be used locally to soothe pain. After death from methyl alcohol, there is some congestion in the brain and elsewhere, but the blood is not materially changed. After death from butyl and amyl alcohols, the blood is much more venous, it very readily forms a loose clot, and the brain and even the muscles are found engorged with blood. The changes are nearly the same as those after death by delirium tremens.

The action of Mercaptan or sulphur alcohol—in which an atom of sulphur takes the place of the oxygen atom of ethyl alcohol—has been investigated by Dr. Richardson, and his intimations are very interesting. This alcohol causes no excitation or intoxication, but an unhappy sleepiness, loss of muscular power, and slowness and feebleness of pulse. Frogs, on breathing the vapor, fall into a lifeless state, the eye remaining bright. The effects of mercaptan pass off with little injury. It escapes by the breath, to which it imparts a peculiar odor (different from that of mercaptan), the odor common to the breath of those who have drank ethyl alcohol to excess. And it is suggested that this excretory modification of mercaptan is actually formed in the body from ethyl alcohol, perhaps from the sulphur-bearing compounds of the bile.

The identification of fusel-oil, in liquors containing it in notable quantities, after more or less vaporization of the ordinary alcohol, is familiar to most pharmacists and physicians, but within a few years a very convenient method of extracting fusel-oil has been adopted by chemists and helps much in its closer determination. An ounce or two of the liquor is warmed (on the water-bath), till nearly all the ethyl alcohol is removed, then shaken, in a sufficiently large test-tube, with half its bulk of pure chloroform or about an equal bulk of pure ether. (Or the liquor may be

at once treated with the chloroform or ether, if enough water be added to throw the chloroform or ether out of solution as largely as possible.) The tube is stoppered, and set aside till the fluids have separated, when the chloroform or ether is taken out with a pipette and evaporated in a dish at warm or common temperature—the fusel-oil being obtained with the residual moisture. It may now be examined, as to odor, and by sulphuric acid and other reagents.

MICROSCOPIC ANALYSIS (1.)

A tabular guide or working outline, for the systematic examination of drugs by the microscope, is presented now by Professor Harrington, as a scheme for the operator, to be used with works containing full descriptions of the microscopical characteristics of drugs. It is, however, but the tabular part of a forthcoming book on the microscopic analysis of drugs, the manuscript of which has been already in use in the microscopical laboratory, as more compact and accessible to students than the German and French authorities. The elaboration of microscopical work, as a system of examination of the drugs in commerce, is an undertaking of the present generation. The books devoted to the subject are new, as hand-books they lack compactness, and none of them are in English. In this state of the subject, the appearance of these tables by Professor Harrington will be welcome to everyone who desires to use the microscope with drugs.

When the pharmacist desires to express unlimited confidence in the integrity and honor of a dealer or manufacturer, he has been accustomed to say: "I should not fear to buy powdered drugs of him." Now, it is to be hoped, in the generation to come, the pharmacist will be able to select his powdered drugs on the market, by inspection, with the same self-reliance that *he* selects unbroken drugs.

(1) *The Identification and Microscopical Examination of Drugs and other Vegetable Products.* By Mark W. Harrington, M. A., Assistant Professor in charge of Botany in the University of Michigan. Ann Arbor: John Moore, 1876. Pp. 34.

The need of systematic methods for the identification of organic substances and organized products becomes every year more urgent. Systematic examination is the only conclusive examination for impurities in the the article of commerce—any other work furnishing only the answers to certain guesses. Also, systematic analysis is the best possible procedure for the accurate investigation of the materials of nature. Identification enforces comparison and classification. In the analysis of vegetable products, the microscope must be the companion and complement of chemical operation. Many bodies are far more easily recognized by their organization than by their chemical composition and character. Proximate chemical analysis has yet to make its achievements with organic materials; the poverty of its present resources showing the plainer by contrast, on the one hand, with the efficiency of inorganic chemical analysis, and on the other, with the advances of chemical synthesis. But the future elaboration of systematic chemical analysis of organic products will but make more imperative the demand for systematic analysis by the microscope. And both these branches of science, as applied to vegetable products, have an importance in pharmacy greater than in any other profession.

FROM THE PHARMACOPÆIA OF THE PHILADELPHIA HOSPITAL.

Chlorodyne : R. chloroformi, fʒss; spiritus ætheris, fʒjss; olei menthæ piperitæ, gtt. viii; oleoresinæ capsici, gtt. ii: extracti cannabis indicæ, gr. vi; morphiæ muriatis, gr. xvi; acidi hydrocyanici diluti, Mlxv; acidi hydrochlorici diluti, fʒj; glycerinae, mellis, aa, q. s. ad fʒiv. Fiat mistura secundem artem. Signa: dose, 15 to 20 drops.

Pilulae Aloes Compositæ : R. pulveris aloes socotrinæ, ʒss; ferri sulphatis exsiccatæ, terebinthinæ albæ, aa, ʒii. Misce et fiant pilulae cxx. Signa: Each pill contains 2 grains of aloes and one grain each of iron sulphate and tupentine.

Pilulae Cinchonæ et Arsenici : R. cinchoniæ sulphatis, ferri

redacti, aa, 3ss; extracti nucis vomicæ, gr. xxx; acidi arseniosis gr. vi; misce et fiant pilulæ, cxx. Signa: each pill contain, 1-20th grain of arsenic, $\frac{1}{4}$ grain nux vomica, and 2 grains each of iron and cinchonias.

Pilulæ Podophylli Compositæ: R resinæ podophylli, grs xx; extracti colocynthidis compositi, extracti hyoscyami, aa, 3ij. Misce et fiant pilulæ, cxx. Signa: each pill contains $\frac{1}{6}$ th grain podophyllum resin and 1 grain each colocynth and hyoscyamus.

Selections and Translations.

BANDAGING.

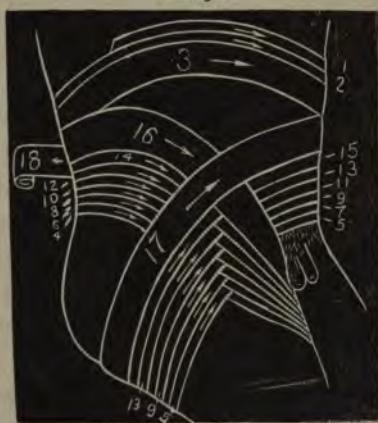
(Continued from March No.)

CROSS OF THE GROIN—(ASCENDING SPICA OF THE GROIN.)

DESCRIPTION.—This should be made from a roller nine yards in length by two inches in width.

APPLICATION.—Place the initial end of the bandage at the

FIG. 91.



Cross of the Groin.

front of the abdomen, 1, and confine by the two horizontal circular turns 2 and 3. Continue on in the same course till you come to the ilium of the injured side, when you descend obliquely across the inguinal region, passing down between the thighs, thus completing the fourth course of the bandage. You then encircle the thigh of the same side, and, on coming to its

anterior surface, ascend obliquely across the inguinal region, from without inwards, upon the abdomen, to the opposite side of the body, thus completing the fifth course. Course 6 is made

similarly to course 4; course 7, to course 5; course 8, to course 6; course 9, to course 7; and so on until the roller is nearly exhausted, when you make one or two horizontal turns about the abdomen, and confine.

USES.—For maintaining dressings upon the inguinal region; also for making compression upon any of the enlarged glands in this neighborhood, or for closing fistulous parts, and for maintaining a replaced inguinal or femoral hernia.

VARIETY.—*Descending Spica of the Groin.* This differs from the preceding only in having the courses of the bandage across the groin run from above downwards; that is, course 4 of the bandage is put in the line of course 16; course 5, in the line of course 17, course 7, in the line of course 15, and so on. They each answer the object, and hence can be employed indifferently.

CRURO-INGUINAL TRIANGLE.

DESCRIPTION.—A triangle one yard in length across its base, and some eighteen inches in height.

APPLICATION.—Place the base of the triangle, A, just above FIG. 39.



Cruro-Pelvic Triangle. The apex is then to be carried backwards and downwards across the gluteal region of the injured side, and confined as usual.

USES.—This bandage of Mayor's is very useful in confining dressings to one of the nates, upper part of the thigh, or one of the inguinal regions.

VARIETY.—The *Cruro-Pelvic Triangle* is made, essentially, in the same manner; the only difference being that the base of the triangle is applied farther up upon the abdomen, thus adapting it more especially for confining dressings about the crest of the ilium, and the lower lateral portion of the abdomen.

THE COMMON PLASTER DRESSING—(PIROGOFF'S PLASTER BANDAGE.)

DESCRIPTION AND APPLICATION.—Having first well padded the limb with cotton wool, envelope it with a flannel roller, neatly, evenly and somewhat tightly. Then make your plaster ready, by getting it to the consistency of cream, by adding to it about an equal bulk of water, (mixing up but one-half a teacupful of it at a time); into this mixture dip the pieces of muslin (thin) that you have prepared in suitable strips, and squares, and begin laying them evenly around the limb. As soon as the plaster mixture begins to harden in the dish, throw it out and mix up a new batch, continuing the application of the muslin strips as before. You will find strips two to four inches in width, and long enough to go one and one-half times about the member, the most convenient size for applying, except in the region of joints; here squares, or oblong squares, are very serviceable. When you have the whole to the requisite thickness to furnish efficient support to the member, encase the whole dressing with a layer of the gypsum, by pouring a portion upon the limb enveloped with plaster-clothes, along its entire length.

The same cautions should be observed here as in the preceding variety, remembering this is a *permanent* dressing. The limb should be kept immovable during the application, and *very* quiet for some time afterwards, so that the plaster may not *be* cracked whilst hardening. After this, if the condition of the patient permits, the member can be swung in a “sling,” and the patient permitted to walk or ride out with little or no danger.

USES.—These are similar to those of the Bavarian bandage.

It might be well to notice that the *hardening* of the plaster can be *delayed* by the addition of a little stale beer, or size, to the mixture; or it can be *accelerated* by the addition of sodic chloride (common salt), or by using warm water to "wet it up." It is best to paint the whole after it is dry, with an application of glue, or egg-albumen, so as to prevent "chipping" of the exterior. This bandage is also made of starch.

TOPICAL TREATMENT OF CHRONIC DYSENTERY.

Dr. T. Gaillard Thomas, in the *N. Y. Medical Journal*, for January, relates the following case to show the wonderful results which may follow local treatment in this intractable disease:

"On the 16th of September, 1875, I was sent for to see Mrs. X, who brought me a letter from Dr. J. Goodman, of Louisville, Ky., who stated that she had "suffered from chronic dysentery for four or five years," and that during that time she had had "several attacks of acute inflammation of the bowels, in which she was extremely ill."

The history, as given by the patient, was this: On the 9th of December, 1870, at the moment that she received the unexpected tidings of the death of a brother, she was suddenly seized with acute dysentery. This became chronic, and exhausted her by the severe pain, frequent evacuations, and haemorrhages which accompanied it. At short intervals acute attacks would be engrafted upon the chronic state, apparently excited by indiscretions in diet or unusual fatigue, and in some of these her conditions became alarming. In her written statement she says: "I have been ill for five years; even when able to sit up and go about the house have had constant dysentery; the smallest number of actions from my bowels being eight, all containing blood, and mucus. It was no rare thing for me to have twenty-seven and more actions from the bowels a day. On these occasions I would lose a large quantity of blood. I lost color, appetite, strength and spirits, while my nervous system was in a most painful condition. I have been attended by six physicians, and

would appear to improve, but soon would drift back to my bad condition. The treatment that gave me more relief than any other (until I came to New York) was some injection used by Dr. Goodman, but I soon grew discouraged, and induced him to discontinue it. I left Louisville, September 12th, in a most desperate condition, Dr. Goodman having sent me to New York."

Upon the arrival of Mrs. X. in New York I saw her with Dr. Lewis A. Sayre, who had previously seen her, and, at his and her request, I took charge of the case. Knowing by reputation the practitioners under whose care she had been for five years, I had little hope of accomplishing any good for her by the ordinary methods of treatment, for I felt fully satisfied that all these had been exhausted. My only hope of curing her lay in a resort to local treatment after the method which I now proceed to describe.

On the 19th of September Dr. H. F. Walker anæsthetized the patient and I proceeded to make a thorough examination of the rectum. After etherization she was placed in the left lateral position, and, after stretching of the sphincter ani by the fingers, a long duck-bill speculum was introduced. This was held by my nurse exactly as in vaginal examinations, while by a depressor I pressed downward the anterior rectal wall. No one who has not examined the rectum in this way can imagine the facility with which the whole canal can be seen. In this instance it was perfectly exposed up to the sigmoid flexure. I now cleansed it of all fecal matters by a long glass tube so bent upon itself at its upper extremity as to throw a stream of water from a Davidson's syringe back toward the anus.

Throughout the whole extent of the intestine exposed to view the mucous membrane was seen swollen, oedematous, hanging in haemorrhoidal masses and studded with deep ulcers with grayish bottoms. It was greatly engorged, and presented that deep red, almost violet, hue which is seen in the throat in cases of diphtheria.

On this occasion no application was made, and, as the ~~anæs~~

thetic had disturbed the patient's stomach and rendered her nervous, nothing more was done until the 30th of September. Then ether being again administered by Dr. Walker and the bowel thoroughly cleansed, I wrapped a small piece of wet cotton around the end of a whalebone rod, and, dipping it in pure commercial nitric acid, lightly touched the swollen mucous membrane and all the ulcers intervening between the sigmoid flexure and the anus. No superfluous fluid was allowed to attach itself to the cotton and the cauterization was nowhere so decidedly practised as to render the occurrence of sloughing possible.

Upon recovery from the anæsthetic a slight amount of pain only was complained of, and writing of the subsequent effect the patient says: "It soothed me and I slept well. This was the first real respite which I had experienced in five years."

At this time the patient was confined to the milk-diet as much as possible and limited as to exercise; but, as both these plans of treatment had been adopted and had failed before she came under my care, I did not deem it wise to press them too much upon her for fear of disheartening her. This application proved of decided benefit in diminishing the number of evacuations, the amount of blood passed, and the degree of pain experienced.

On the 6th of October another application of nitric acid was made. This proved still more beneficial. The patient in her written history declares, "The second application improved me very decidedly." After it the milk-diet was more strictly adhered to, and exercise was more restricted.

On the 11th of October the third and last application was made. Dr. Walker and myself were then both struck by the great improvement in the appearance of the bowel. The ulcers had almost entirely disappeared; the mucous membrane was less swollen, and the appearance of engorgement much modified. After this application the milk-diet was strictly adhered to, and the patient for ten days confined to bed. The result of this application surprised me. Blood ceased to pass with the evacuations; these in three days became limited to one in twenty-four

hours ; all pain ceased, and the patient rapidly improved in general appearance, in flesh, and in spirits. " To-day," she writes, " October 26th, I feel that I am entirely relieved, having now for eight days had only one action in every twenty-four hours. All pain has left me. I am gaining flesh, color, appetite, and spirits, and there is not even a trace of dysentery left."

Care was taken not to apply the caustic so freely as to cause sloughing and subsequent rectal stricture. The recovery was complete.

ATROPIA IN OPIUM POISONING.

DR. H. C. WOOD, in a clinical lecture published in the *Philadelphia Medical Times*, gives the following practical hints bearing on the use of atropia in opium poisoning :

A great deal has been written concerning the antagonism of atropia and opium. I do not believe that there are any two medicines absolutely antagonistic ; but there are many drugs which are in some of their actions opposed to one another. But atropia and opium are not antagonistic even in the sense that aconite and digitalis are ; and yet atropia is invaluable in opium-poisoning. Clinical experience has, to my mind, fully established this, and the very careful experiments of the late Dr. J. Hughes Bennett have demonstrated it in regard to the lower animals.

Atropia should be employed not as an antidote, but as a remedy when the respiration is failing, precisely as alcohol is used when the circulation is failing.

Atropia is a powerful stimulant to the respiratory centres. If it be administered in small doses when the breathing is very slow, the respirations are increased very remarkably in frequency, and, the carbonic acid being thrown off from the blood, the patient arouses, restored to consciousness not by the direct but by the indirect action of the remedy upon the nerve-centres.

In what way and quantity should the mydriatic be given ? Always use the *alkaloid* hypodermically, and in very small repeated

doses, if possible. Recollect, belladonna-poisoning may be and often has been produced, and I believe in some reported cases has caused death. It is commonly stated that the pupils should be the guide, the quantity given being regulated by the amount of the dilatation produced. But as opium contracts the pupils by its influence on the brain-centres, whilst atropia dilates them by acting locally on the peripheral nerves in the iris, it is not proper to rely solely or chiefly upon the state of the pupils. In small doses atropia stimulates the nerve-centres, but in larger doses it paralyzes the trunks of the nerves. Hence, in opium-narcosis, if doses of atropia large enough to influence the nerve-trunks were given, a nerve-paralysis would be added to that of the centres caused by the opium; so that, instead of arousing the centres by its stimulant effect, the remedy would increase the embarrassment by paralyzing the nerve-trunks.

Just think, gentlemen, why you give the atropia,—to stimulate the respiration: therefore let its influence on that function direct you as to its administration. For instance, suppose we had a patient who was in the last stage of opium-poisoning, with slow respirations,—down to four or five in the minute,—and had exhibited one-thirtieth of a grain of atropia hypodermically. If in fifteen minutes or half an hour the respirations had risen to ten, we would know that the desired end was being accomplished, and as long as the breathing continued to increase, I would give no more of the remedy; but if the respirations commenced to grow less frequent, it would be proper to exhibit the one-sixtieth of a grain, and repeat it every half hour until the breathing showed the effect, or the dilatation of the pupil warned us that we were approaching the danger-point. The golden rule is, *Give the least possible quantity that will produce the required effect.*

SALICYLIC ACID IN DIPHTHERIA.

Dr. Letzerich (*Virchow's Archiv*, Bd. lxiv., Heft 1, 1875) has made a number of experiments as regards the action of salicylic acid upon the organisms found in diphtherial deposits, the result

showing that this acid possesses the power of killing the germs in question. He has also used salicylic acid in seven cases of the disease, five of which were mild, two severe. In the former cases a gargle according to the following formula was employed :

R Acid. salicylic., gr. xv ;
Solve in sp. vin. rect., M xxx ;
Aq. destillat., ad ʒviii.

Under the frequent use of this gargle the diphtheritic membrane disappeared from the throat entirely in from two to four days. In the severe cases the treatment was both internal and external. Four and a half grains of the powder with an equal quantity of sugar were administered every two hours, and the throat was swabbed with a solution of the acid in alcohol and water (five parts acid, one part alcohol, and fifty parts water). In addition, the throat was occasionally touched with a damp camel's hair pencil dipped in the powdered acid.

The result of this treatment was so favorable that Dr. Letzterich urges strongly its further trial.—*Phil. Medical Times.*

PROPYLAMIN IN ACUTE RHEUMATISM.

Dr. Lee has treated twenty-eight cases of acute rheumatism with a solution of one gramme of propylamin and ten of sugar in one hundred and twenty grammes of peppermint-watér, of which a tablespoonful was given every two hours ; altogether from three to five grammes were so taken by each patient, whose limbs were bandaged with cotton-wool and card-board. All the twenty-eight cases suffered from multiple joint-affections ; in fourteen cases the disease disappeared for the first time, in the other fourteen it was recurrent once or repeatedly. Five cases were complicated with slight, five with severe affection of the heart, one with acute oedema of lungs, and one with diphtheria. All were restored to perfect health and military duty except one. The average duration of the illness in these cases was 17.7 days per head ; none was discharged before full recovery was proved by increased weight of body and gymnastic exercises. The

effect of propylamin is summed up as follows: 1. The disease becomes very soon subacute, and remains so to the last. 2. The sedative effect on the nervous system is shown by decreased tension in the circulatory apparatus; pulse and respiration become slower, and high fever decreases within thirty-six hours. 3. With at first profuse, then more gentle perspiration, pain decreases very markedly. 4. The color of the skin acquires a peculiar grayish tint. (?) 5. Sleep quickly returns, and is not interrupted by pain. 6. With a cleaner tongue appetite returns fast. 7. The quantity of urine is not much increased; it is mostly clear and transparent, only slightly acid, and with little sediment. 8. All patients took the drug without dislike; it was never applied externally.—*Lancet.*

PROPHYLACTIC IN CHOLERA INFANTUM.

The numerous cases of gastro-intestinal catarrh occurring in small children during summer preponderate among such as are fed with the bottle. The various kinds of treatment adopted by physicians have not proved very successful: hence a prophylactic against this disease is of great value.

As the affection originates in the nourishment of the infant Jacusiel (*Berlin. Klin. Wochenschrift*, 1875) has been led to add two teaspoonfuls of a one-third per cent. solution of salicylic acid in water to the daily allowance of milk, with the effect of rendering the germ of the disease powerless. The children fed in this manner have not had gastro-intestinal catarrh, or suffered any inconvenience from this rather free use of salicylic acid. The remedy is harmless and also inexpensive.—*N. Y. Medical Journal.*

PROPERTIES OF GRINDELIA ROBUSTA.

DR. HENRY M. FISKE (*Pacific Med. and Surg. Journal*, Aug. 1875), has employed the grindelia robusta, an herbaceous perennial plant, a native of the west coast of America, in a variety of cases with excellent results. It is a demulcent as well as a

stimulant, and makes an excellent dressing for vesicated surfaces. In burns, the fresh herb bruised and applied frequently over the injured parts is an unequalled anæsthetic. It is an excellent remedy in uterine catarrh, or in catarrh of the genito-urinary tract. In subduing the intense burhing and itching of vaginitis, as well as painful priapism, it is of great value. In the first, the tincture or fluid extract, of the strength of one tablespoonful of either to about four tablespoonfuls of water, should be used as an injection three or four times a day, and cloths should be soaked in it and applied to the pubes as hot as can be borne. In the other, a direct application should be made of the bruised plant, in the form of a poultice, if possible, changed frequently. In a few hours marked beneficial results will be noticed. In iritis, no matter what the cause, whether gout, rheumatism, scrofula, or violence, it seems to be almost a specific. Dr. Fisk gives two cases of iritis in which he employed grindelia with excellent effect.

In the same journal of December, Dr. James G. Steele bears testimony to the efficacy of this drug in poisoning from *Rhus-toxicodendron*—Poison Ivy—and as a remedy in asthma. He gives the following directions for its use :

For Poison Oak (or Poison Ivy) eruptions the method suggested is to mix one or two teaspoonsful, of the fluid extract with half a tumbler of cold or tepid water, and apply freely with a sponge or cloths dipped in the mixture to the parts affected. One or two applications will often suffice for a cure ; but if the disease has been of long duration, several days may elapse before entire relief is obtained. In severe cases of poisoning, cloths dipped in the solution may be bound upon the parts, and, if necessary, more of the fluid extract added, thus increasing the strength of the application. The most obstinate case of poisoning will give way to this mode of treatment, and immediately after the first application a most surprising relief is experienced. In cases of asthma, rose cold, and hay fever, ten to twenty drops of the fluid extract may be given every half hour, mixed with sweetened water or milk, until relief is obtained, when the amount and frequency of the dose can be lessened.

The solid extract is made into pills of three grains each, and given three times a day, one or two of the pills being administered for each dose.

CHLORAL SUPPOSITORIES.

The production of a chloral suppository containing a sufficient proportion of this drug to cause sleep has heretofore been deemed impossible. M. H. Mayet, pharmacien, of Paris, has, however, devised the following formula, by which he manages to get forty-five grains of chloral in each suppository :

R. Ol. theobromæ.....gr. xxxv.
Cetacei,
Pulv. chloral., aa.....gr. xlvi.
For one suppository.

These suppositories are of good consistence, and may be easily put into use.

INFANT MORTALITY.

Dr. H. B. Baker, Secretary of the Michigan State Board of Health, sent a paper to the American Public Health Association, in Baltimore, which was read at the meeting of that body, on "Infant Mortality in the State of Michigan." It gave the percentage of all infants born alive in the State who survived until their first birthday at about 84 per cent. of males and 86½ of females, including still births. The percentage of those who survived to their fifth birthday are 73½ males and 77½ females, including still-births. The causes of death are in the order named : Scarlet fever, diarrhoea, cholera infantum, pneumonia, and dysentery. The deaths reported of children aged under five years for the year 1873 from these diseases was as follows : Scarlet fever 361, diarrhoea 326, cholera infantum 302, pneumo-

nia 258, dysentery 252. The mortality from these causes is probably greater in cities and villages than in rural districts; but much of it might be prevented by thorough and enlightened action on the part of the local boards of health, and still more, if parents were well informed. A prominent cause of infant mortality is inflammation of the lungs, and the greatest number of deaths seem to occur in a cold and dry atmosphere. Such a slaughter of innocents by scarlet fever in this State is a stinging reproach on the local boards of health for their inefficiency, and a powerful argument in behalf of a State Board of Health, which shall perform the noble duty of educating the people in the way of life.

PUBLIC HEALTH ASSOCIATION.

The American Public Health Association held its annual session in Baltimore, Nov. 9. The Secretary, Dr. Elisha Harris, read a sketch of the various State Boards of Health, in which he paid the following compliment to the Michigan body: "The excellent balance and breadth in the *personnel* of this Board, the expert ability of its secretary, who is *ex officio* register of vital statistics for the State, the patience and thoroughness evinced in the researches of various members of the Board, and especially the direct influence and intelligence which the officers of the Board brought to bear in all the schools throughout the State, made this Board the best educator of the people, and especially of young people and the children, that any State has yet had in its central Board of Health." The only gentleman who is recorded as being present from this State is Dr. H. O. Hitchcock, of Kalamazoo. Most of the other States in the Union are represented by 43 different gentlemen.

COLD WATER INJECTIONS IN TYPHOID.

The use of cold water in therapeutics, and especially in typhoid, is one of much present interest. Dr. Foltz, of Lyons,

has lately published in *Lyon Médicale*, a valuable series of papers, containing the results of his experiments in the use of cold water injections in typhoid fever. He states that they exert a general and local action. The local action consists in a cooling sensation accompanied by intestinal contractions. The general action produces slackening of the pulse, marked diminution of temperature, and quietude of the nervous system. It abates thirst, excites the appetite and increases the secretions. The cooling, sedation and tonic action is about the same with all injections under 38° (centigrade); but it is so much more intense and durable as the injection is colder, more abundant and more frequently repeated. As to the therapeutical indications of cold water injections, Dr. Foltz thinks they are very numerous. Through their local action they are of use in affections of the abdomen, and through their general action in febrile maladies. They are, therefore, doubly necessary in typhoid fever, for the treatment of which they constitute the chief remedy.

CHLORAL IN OZÆNA.

The following has been used and highly recommended as a topical application in Ozæna:

R	Chloral. Hydrat.	.	.	.	.	.	3ss
	Aq. Puræ,	.	.	.	.	.	3vij
M							

ERGOT IN HÆMOPTYSIS.

Dr. Williamson, of the Royal National Hospital, for consumption, Isle of Wight, reports in the *Lancet* as the result of the use of Ergot, in fifty cases of hæmoptysis, forty cases in which all bleeding was rapidly checked. The fifty patients were suffering from phthisis in different stages, and the amount of the hæmorrhage varied from abundant bright streaks in the sputa to the expectoration of several ounces of blood. As all the cases occurred in hospital practice, very little time was lost between the advent of the hæmoptysis and the exhibition of the

remedy. The ergot was invariably given by the mouth and in form of the liquid extract. Much has been said about the success of the sub-cutaneous injection of ergotin and its superiority to this plan, but since there was no difficulty in any of the cases in administering the draught, and as the drug acted in most instances with a promptitude which was quite satisfactory, the hypodermic method was not employed. Forty minim doses of the liquid extract may be given twice within the first hour, and guided by the results, at least every two hours afterward, the dose being diminished and given less frequently as the hæmorrhage subsides. Care should be taken to use a sound and fresh preparation of the ergot.

GELESEMINUM IN NEURALGIA.

Dr. Spencer Thomson, (*London Lancet*,) bears testimony to the marked benefit of gelseminum in relieving neuralgic pains. He considers it most applicable to those cases in which the pain is limited to those branches of the trifacial nerve, supplying the upper and lower jaws, more especially the latter and more particularly when in either jaw the pain is most directly referred to the teeth or alveoli. He administers it in larger doses than is usually given, giving twenty minims of the tincture for the first dose and repeating any time after an hour and a half, if relief is not given. He has rarely been obliged to administer the third dose.

MANAGEMENT OF PREMATURE CHILDREN.

Dr. Atfield, in the *Archiv. fur Gynakologie*, Band viii, says that cases occurring in the practice of others and in his own have proved to him that premature infants ordinarily regarded as non-viable may, under favorable circumstances and assiduous care, live and thrive. He gives examples in which children born at the twenty-sixth week were preserved alive. Immediately after birth, the child must be wrapped in cotton and placed in a warm bath, so as to impart to it the heat which it is unable to produce

in sufficient quantity. The baths, which should be somewhat warmer than usual, must be frequently repeated. Great importance is attached to awaking the child regularly every one or two hours in order to feed it. As long as it does not suck, milk (woman's milk is the best) must be given to it by a tea-spoon. With a view to the better development of the lungs and the movement of the thoracic muscles, it should be excited to cry by slight irritation. It is dangerous to bring such children into the open air for several months after birth, as their air-passages are readily affected.

A PLASTER TO ARREST POST PARTUM HÆMORRHAGE.

Dr. Boyce writes thus to the *Virginia Medical Monthly*: Some years ago I had a case of post partum hæmorrhage, which, notwithstanding my best directed efforts seemed to threaten the life of my patient, when an "old woman" told me to take the "white of an egg and mix with it enough alum to form a plaster, and place on her back, close above her hips," which, I must say, to my surprise, checked the bleeding almost immediately. Since then, I have tried it in eighteen cases and found it to work like a charm, almost without a failure. I believe the above will prove of great value in the hands of the profession, while it does not stand in the way of treatment of the patient by other remedies at the same time. Many will laugh at such a prescription, and I do not attempt an explanation of its *modus operandi*. But as amusing as it may seem or as unscientific as the prescription may be, I yet know it does good.

STOMATITIS MATERNA.

Dr. J. B. Hoag writes to the *Journal of Materia Medica*: I have recently come in the possession of a prescription, which, from the testimony of those who have repeatedly used it, and in whom I have the most explicit confidence, as well as from my own observation and experience, I believe to be, when thoroughly

and judiciously used, as nearly a specific in this complaint as it is possible for any medicine to be in any disease. The prescription is as follows:

R Biniodide of Mercury.....grs v
 Iodide of Potassium.....grs x
 Water.....3 j

M. Dose, gtts. 3 to 5, three times a day. For topical use, add six drops to a tablespoonfull of water and wash the mouth thoroughly three or four times a day. It is of great importance that the water should contain no alkaline properties, hence the necessity of using distilled, rain, river or other "soft" water.

It should be given after meals, as, when given on an empty stomach, it is liable to nauseate.—*Medical and Surgical Reporter.*

A DEODORIZED FLUID EXTRACT OF SENNA.

Prof. C. Lewis Diehl, in the *American Practitioner* for December, details a method for the preparation of a mixture to which he has attached the above name and which he claims is a pleasant and active preparation of senna: Take of Tinnevelly senna sixteen troy ounces; stronger alcohol, glycerin and water, of each a sufficiency. Macerate the leaves in four pints of stronger alcohol for two days and express; add to the expressed leaves two pints more of stronger alcohol and again express; then dry and reduce them to a fine powder. According to the general directions for preparing the officinal fluid extracts, percolate this powder first with a mixture of six fluid ounces of stronger alcohol, two fluid ounces of glycerine and eight fluid ounces of water, then with a sufficiency of six measures of stronger alcohol and ten measures of water, till thirty-two fluid ounces of percolate are obtained. Of this the first twelve fluid ounces are set aside, the remainder of the percolate is evaporated to three fluid ounces, and, together with one fluid ounce of stronger alcohol, added to the reserved portion; after standing several days decant the clear liquid, or filter. The result is a dark brown,

clear, thin, syrupy fluid extract, which possesses very little odor or taste, and in these scarcely reminds of the senna. When it is mixed with three or four times its volume of simple elixir, a very pleasant elixir is formed which corresponds in its strength to the syrup of senna formerly officinal in the United States Pharmacy, and has proved an active and efficient preparation.

By this method all odorous and resinous components are removed, while cathartic acid, the active constituent, being insoluble in alcohol, remains.

It has been suggested to combine with this preparation a small quantity of taraxacum, and Prof. Diehl presents the following formula for such a compound, which he calls compound elixir of senna. Take of the deodorized fluid extract of senna four fluid ounces; fluid extract of taraxacum, one fluid ounce; compound tincture of cardamon, half a fluid ounce; simple elixir, sufficient to make a pint. This is a very pleasant combination of senna and taraxacum, which probably possesses some advantages over the simple elixir of senna.

AMERICAN CENTENNIAL CELEBRATION—INTERNATIONAL MEDICAL CONGRESS.

The medical societies of Philadelphia, animated by a just spirit of patriotism, and an earnest desire to unite with their fellow-citizens in celebrating the Centennial Birthday of American Independence, have taken the initiatory steps for the formation of an International Medical Congress, by the appointment of delegates from their respective bodies, who were empowered to organize and perfect a scheme for the above purpose. In accordance with the authority thus given, the delegation has organized the Centennial Medical Commission, with the following officers: President, Samuel D. Gross, M. D., LL. D., D. C. L. Oxon; Vice Presidents, W. S. W. Ruschenberger, M. D., U. S. N., Alfred Stille, M. D.; Recording Secretary, William B. Atkinson, M. D.; American Corresponding Secretaries, Daniel G. Brinton,

M. D., William Goodell, M. D.; Foreign Corresponding Secretaries, Richard J. Dunglison, M. D., R. M. Bertolet, M. D.; Treasurer, Caspar Wister, M. D. Arrangements have been made for the holding of the Congress in the city of Philadelphia, to begin on the 4th and to terminate on the 9th of September, 1876. The Commission propose the following general plan for the organization and business of the Congress: I. The Congress shall consist of delegates, American and foreign, the former representing the American Medical Association and the State and Territorial Societies of the Union; the latter the principal medical societies of other countries. II. The officers shall consist of a President, ten Vice Presidents, four Secretaries, a Treasurer, and a Committee of Publication, to be elected by the Congress at its first session, on the report of a Committee of Nomination. III. The morning sessions of the Congress shall be devoted to general business and the reading of discourses: the afternoons to the meetings of the Sections, of which there shall be nine, viz: 1. Medicine, including Pathology, Pathological Anatomy and Therapeutics. 2. Biology, including Anatomy, Histology, Physiology and Microscopy. 3. Surgery. 4. Dermatology and Syphilology. 5. Obstetrics and Diseases of Women and Children. 6. Chemistry, Toxicology and Medical Jurisprudence. 7. Sanitary Science, including Hygiene and Medical Statistics. 8. Ophthalmology and Otology. 9. Mental Diseases. IV. The language of the Congress shall be the English, but not to the exclusion of any other language in which members may be able to express themselves more fluently. Gentlemen intending to make communications upon scientific subjects will please notify the Commission at the earliest practicable date, in order that places may be assigned them on the programme. In order to impart to the Congress a thoroughly international character, invitations to send delegates will be extended to all the prominent medical societies

in Europe, Mexico, the British Dominions, Central and South America, the Sandwich Islands, the East and West Indies, Australia, China, and Japan. Invitations will also be tendered to medical gentlemen of high scientific position ; and distinguished visitors may be admitted to membership by a vote of the Congress. Among the advantages arising from such a convocation as this, not the least important will be the opportunity afforded its members for the interchange of friendly greetings, the formation of new acquaintances, and the renewal and cementing of old friendships. The Centennial Medical Commission tender in advance to their brethren in all parts of the world a cordial welcome, and a generous hospitality during their sojourn in the "Centennial City." The Congress will be formally opened at noon, on Monday, the fourth day of September, 1876. The registration book will be open daily from Thursday, Aug. 31, from 12 to 3 P. M., in the Hall of the College of Physicians, N. E. corner 13th and Locusts streets. Credentials must in every case be presented. Gentlemen attending the Congress can have their correspondence directed to the care of the College of Physicians of Philadelphia, N. E. cor. of Locust and Thirteenth sts., Philadelphia, Pennsylvania. There is every reason to believe that there will be ample hotel accommodation for all strangers visiting Philadelphia in 1876. Further information may be obtained by addressing the Corresponding Secretaries. All communications must be addressed to the appropriate Secretaries: William B. Atkinson, 1,400 Pine st., Philadelphia, Recording Secretary ; Daniel G. Brinton, 2,027 Arch st., and William Goodell, 20th and Hamilton sts., American Corresponding Secretaries ; Richard J. Dunglison, 814 N. 16th st., and R. M. Bertolet, 113 S. Broad street, Foreign Corresponding Secretaries.

BISMUTH AND CREASOTE IN INFANTILE VOMITING

The present epidemic of diarrhoea has furnished us at the Birmingham Children's Hospital with a large number of cases, in which vomiting has seemed a more than usually frequent and troublesome symptom.

Purgatives or ordinary astringents being either premised or contra-indicated, a valuable remedy is known in quarter or half drop doses of dilute hydro-cyanic acid, with a grain or two of soda in camphor or dil. water. But in severe cases with much depression, and in many cases as an alterative treatment, bismuth and creasote together will be found extremely good. They may be well combined by dropping a minim of the liquid first upon a small quantity of magnesia, rubbing up with eight grains of subnitrate of bismuth, and dividing into four powders; for elder children, into two. They should be freshly prepared for use, and to infants given gently on a moistened finger-tip every three, four, or six hours. In the intervals, my cases generally get a little saccharated lime-water with milk. This plan I have proved now for several years with much success. It is not more infallible, perhaps, than others, nor will it supply for the carelessness or bad hygiene of poor mothers, but, over some approved remedies, it has this vast advantage, that it can do no harm.—*Brit. Med. Journal.*

VENTILATION OF DWELLINGS.

At a meeting of the Lansing Scientific Association, December 7th, as reported in the Lansing *Republican*, the question of "ventilation of dwellings" being under discussion, Dr. H. B. Baker, Secretary of the State Board of Health, presented the following points as well established :

Carbonic acid gas should not exceed 8 parts in 10,000 of air. It is a deadly poison, and although it is not the most important element of impurity in the atmosphere, it is the easiest measured and tested.

He wished to emphasize three points, namely, that we can have a standard of the quality of air; that we can easily secure air of that quality; and that we have instruments and means of readily learning whether we have reached a proper standard.

He proposed a standard of the quality of the air let into our rooms, and stated that the mortality reports of this state show

that the smallest number of deaths occur in the month of June, thus hinting to us that the air of that month on an average is more healthful than that of any other season of the year. It is presumable, therefore, that the air of June should be imitated as nearly as practicable in our dwellings. The average temperature of our-door air in that month is about 69 deg. Fahrenheit, which also is the proper sitting temperature. As to moisture, the proportion of saturation of the atmosphere in June is 63 per cent, the average of the last ten years,—or six grains of the vapor of water in each cubic foot of air. The rainfall in June is the highest in the year, but the proportion of cloudiness is nearly the least. The air introduced into dwellings should be warm, moist, and previously subjected to the influence of sunlight.

The best manner of introducing cold air into a room is directly upon the stove, through a pipe into a jacket about the stove. Any air which is heated requires the addition of vapor of water, which may be secured by boiling water on the stove or otherwise. By rapidly changing the air of a room by withdrawing it from the floor and bringing it in as above mentioned, two important objects are attained,—a more uniform temperature at our hands and feet, and a downward current which tends to bring the dust to the floor and not up to the nose. To ascertain the degree of moisture in a given room, use two thermometers, one with dry bulb and the other with wet. The difference in the two will indicate, by tables easily procured, the proportion of moisture. For purposes of heating and ventilating, stoves are generally worse than fire places, but stoves can be so arranged as to be better than fire-places, for the reason that warm instead of cold air may thus be brought into the room.

*THE USE OF LIQUOR BISMUTHI FOR HÆMORRHOIDS AND
PROLAPSUS ANI.* By JOHN CLELAND, M. D., F. R. S.

While it may be freely admitted that in many instances hæmorrhoids cannot be treated successfully without surgical operation, and while for my own part, in a considerable experi-

ence I have always had good reason to be satisfied with the results of the operation recommended by Mr. Syme, it is evident that in a large number of cases operative interference is unsuitable; in others the affection, however ameliorated by such interference, remains uncured; and it is desirable that whenever it is possible, a cure should be obtained without resort to so disagreeable a measure. With this end in view I venture to say a few words on the use of liquor bismuthi given as enema

My attention was first drawn to this remedy by a rather peculiar case of prolapsus of the bowel. A middle-aged woman came for consultation in such a condition that she could with difficulty walk, inasmuch as whenever she parted her thighs, the bowels emerged and hung down for about six inches, in folds of such a character as made it evident that at least half-a-yard of intestine was extruded. The whole surface of the mucous membrane exposed was a deep raspberry red, like those cases of haemorrhoids which some practitioners delight to treat with nitric acid. The condition was chronic; external supports had failed; the possibility of removal of the whole prolapsed mass suggested itself, but such an operation attended with enormous risk was not to be thought of except in the case of a patient enjoying a certain measure of health. Astringents had been tried and failed, and it seemed questionable if astringents were suitable remedies in such a case. It appeared much more probable that an irritated and congested condition of the mucous membrane led to a derangement of the action of the muscular walls than that in a strong woman, a local relaxation, involving sphincters and intestinal walls, had produced a prolapsus, which led to congested mucous membrane, from exposure. I recollect the relief frequently obtainable in cases of haemorrhoids, by application of white bismuth or oxide of zinc. In this case, however, ointment or powder obviously could not be effectually applied. But the liquor bismuthi in stomach affections has a soothing influence far superior to white bismuth. I therefore directed my patient to mix a dessert spoonful of liquor bismuthi with half a wine glassful of starch, and after getting into bed

and returning the bowel to its place, to introduce this enema and retain it. I was much pleased, a few weeks afterwards by my patient calling to tell me that she was nearly well, and to ask if she might continue the remedy. This she was ordered to do; and I have ever reason to believe that she has had no return of her malady. I have since frequently used the same remedy for the ordinary prolapsus in children, with invariable and rapid success.

In severe haemorrhoids there are usually three parts affected, the integument, the mucous membrane, and the haemorrhoidal veins. Plainly the veins cannot be reached by local medicaments, and those comparatively few cases in which they alone are involved must be treated in other ways. The integument, together with the edge of the mucous membrane up to the grasp of the sphincter, is within easy reach; and may be treated in various ways according to circumstances. Thus, when the congestion is superficial and produces a catarrhal oozing, bathing with whiskey or other alcoholic lotion, a small pad of dry cotton wool firmly applied to soak up the moisture, and also zinc or bismuth in powder or ointment are all exceedingly useful; and when a congested surface within easy reach is accompanied with venous engorgement, tincture of iodine sometimes produces surprising effects, although in other instances it is too painful to be borne. But when the mucous membrane is considerably involved, I know no application to compare with injection of liquor bismuthi, which has the advantage of being painless; and as in the case of prolapsus narrated above, the improvement of the mucous membrane has a wonderful influence on both the veins and integument. In instances in which the necessity for surgical interference appeared inevitable, I have had the gratification of defrauding myself of the pleasure of operating, and of seeing the patient recover. This is the more gratifying, as the surgical treatment of haemorrhoids labours under the disadvantage, that, no matter what be the particular operation adopted, it never removes the predisposing cause of the malady.

RUSSIAN CURE FOR DRUNKENNESS.

H. Haurowiz says that for some time past the *Herba serpyllia* (wild thyme) has been used with great success to affect a permanent cure of drunkenness: in case of a relapse (only after years), a short treatment will effect a cure again. The treatment consists in making an infusion of wild thyme ($1\frac{1}{2}$ oz. to $1\frac{1}{2}$ pint), and give the patient a teacupful every half hour. The next day it is given every two hours, and then four to six times a day until the cure is complete, which generally takes from two to three weeks. The effects are in the following order: vomiting, diarrhea, increased urine, strong transpiration; then, generally, increased appetite and craving for acidulous beverages. Diet: easily digested food, and lemonade or other acidulous liquids.—

American Journal of Pharmacy.

THE TREATMENT OF WHOOPING-COUGH BY THE IODIDE OF SILVER.

Dr. Robert Bell, in the *Obstetrical Journal of Great Britain and Ireland*, December number, 1875, gives his experience in the treatment of whooping-cough with *iodide of silver*. He has treated over a hundred cases with this remedy with uniform success; the cough losing the whoop by the end of three weeks; and quite well in six weeks; the usual complications of the disease being exceedingly rare. He prescribes one-eighth grain three times a day. He considers whooping-cough a disease of the gastric periphery of the pneumogastric nerve, and that the silver salt acts as a sedative to this morbidly sensitive nerve.

Ars, ante omnia veritas.

Editorial.

HOMŒOPATHY AND THE ALUMNI OF THE MEDICAL DEPARTMENT.

The persistent efforts of the ring leaders of the crusade against the University, ostensibly because of its relations to homœopathy, met with a most signal repulse at the meeting of

the Alumni of the Medical Department, on the evening of the 28th ult. The importance of wounding the University in the house of its friends, by securing its condemnation by its own alumni, was recognized and not a stone was left unturned to accomplish this. The line of action pursued was of a piece with that which has characterized the procedure of certain of the disaffected since the commencement of the fight which they inaugurated, but in which they now begin to weaken. The first thing done was to secure as large an attendance as possible of their followers, and to ingeniously arrange the hour of meeting so as to secure the non-attendance at the proper time of alumni known to favor the position assumed by the faculty. Having just cause to fear that even by this manœuvre they would still have a doubtful majority, their next scheme was an endeavor, in which the conveniently pliable executive committee of the alumni association was enlisted, to exclude from the meeting the graduating class, thereby seeking to set aside a precedent established at the organization of the association. The latter attempt was a most despicable one. That gentlemen could allow their partisan feelings to carry them to the extent of hurling a gratuitous insult at the young graduates, whom they should have taken kindly by the hand and welcomed into the ranks of the profession, calls for commiseration. The attempt, however, was most effectually baulked—the Alumni of the Medical Department scorning to become a party to such a nefarious procedure—and the class of '76 were received and accorded, as has been the custom at the University of Michigan and elsewhere, the full rights and privileges of membership.

After the alumni were enrolled the faculty, several members of which were present at the meeting, expressed an earnest wish to receive the opinion and advice of the older alumni on the present peculiar relations to homœopathy in which they, through the action of the Legislature and Board of Regents found themselves. They recognized it as their duty as well as their privilege to look to their alumni for counsel, instruction and direction, and invited a full and candid discussion, pledg-

ing themselves to be influenced, in their future relations to this vexed question, by the action of the meeting. In order also that this counsel and direction should come alone from the older alumni, the graduating class, who had already unequivocally endorsed the position they had taken, were pledged to remain neutral on the question—to neither by voice nor vote seek to influence the expression of the association. The faculty sought by no means to act independently of the profession, any insinuation by interested parties to the contrary notwithstanding. They regarded the profession as the highest court of appeal and held themselves amenable to its behests—behests which neither they, the Regents nor the people dare disregard. For years they had single-handed fought this fight, the profession persistently and unjustly remaining aloof, withholding its counsel and aid. The time had now come, however, when it could no longer shift the responsibility to the shoulders of the faculty; things had come to a pass which made an arousal from the lethargy of years imperative. Regent Rynd, who is also an alumnus, expressed himself eloquently and forcibly to the same purport, stating that from the prolonged inaction of the profession, the regents had thought it was dead to this great question which had for years agitated the legislature and perplexed the University, and they had determined to act and were now ready and willing to be judged.

These candid remarks, which disabused the minds of many of the alumni of conceptions they had been led to entertain, were received with unmistakable demonstrations of approval, and when a committee on resolutions appointed by the chair, from members known to be actively in opposition to the faculty's position, submitted a report containing an adverse criticism of that position, the meeting promptly ordered it to be laid on the table—the graduating class, of seventy-seven members, as had been pledged, refraining from voting.

Thus terminated the first attempt of the enemies of the University, and the manner of its termination augurs well for

the enlightened action of the profession at the meetings now shortly to be held.

The alumni association has done itself honor not only by the wisdom it has displayed in this matter, but also by the summary manner in which it rebuked the few who sought to make it a tool with which to gratify an insane hatred against a great and noble institution.

MEETING OF THE STATE MEDICAL SOCIETY.

The 10th annual meeting of the Michigan State Medical Society will be held at Ann Arbor on Wednesday the 10th prox, commencing at 10 o'clock, A. M. From the important business which it is expected will come up for discussion, it is earnestly hoped that every physician throughout the State will make more than an ordinary effort to be present.

AMERICAN MEDICAL ASSOCIATION.

The twenty-seventh annual session of this body will be held in the city of Philadelphia, Pa., on Tuesday, June 6, 1876, at 11 A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy of the United States."

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number; *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward, *at once*, lists of their delegates, in order that the Committee of Arrangements may be enabled to form some idea of the number likely to be present.

CHLORAL AS AN ANTISEPTIC.

Having recently had occasion to remove some shreds of membrane, which had remained in the uterus for a week after a miscarriage at three months, and had occasioned severe constitutional disturbance, we resorted to all the means at our disposal to rid our hand of the horrible stench imparted to it through the operation. In spite, however, of most thorough washings with carbolic soap and subsequent applications of cologne water, the disagreeable odor remained, but was afterwards removed by a solution of chloral hydrate $3\text{ij}.$ to $3\text{jv}.$ of water. We have never employed anything with nearly such satisfactory result in such cases.

*MEDICAL ALUMNI ASSOCIATION OF THE UNIVERSITY
OF MICHIGAN.*

The second meeting of this association was held at Ann Arbor, on the evening of the 28th ult. As was expected, from the nature of the business which the Association would be called upon to transact, the attendance was large. The graduating class to the number of seventy-seven was enrolled. The principal topic of discussion was the Homœopathic question, which the Association disposed of, by laying on the table a series of resolutions, containing an adverse criticism of the position taken by the Faculty on the matter.

The following officers were elected for the current year:

President, Dr. H. F. Lyster.

First Vice President, Dr. F. N. Oakley.

Second Vice President, Dr. H. A. Cleland.

Third Vice President, Dr. M. A. Allen.

Fourth Vice President, Dr. C. H. Lewis.

Fifth Vice President, Dr. J. W. Hawkurst.

Secretary, Dr. P. B. Rose.

Treasurer, Dr. W. B. Smith.

The supper was held at Hangsterfer's Hall, and was a very enjoyable affair. The following toasts were proposed and responded to:

"The University of Michigan."

Response by Prof. A. B. Prescott.

"The State Legislature."

Response by Dr. E. B. Ward.

"The Medical Profession."

Response by Prof. A. B. Palmer.

"The Class of '76."

Response by Dr. H. B. Hatch.

"The Medical Press."

Response by Dr. J. J. Mulheron.

A REMARKABLE CASE.

In the *Medical and Surgical Reporter* of March 4th, Dr. Harriette A. Bottsford, reports the removal, from the urinary bladder of a German woman, of a Meigs' ring pessary, two and a half inches in diameter, said to have been introduced into the vagina for the relief of a prolapsed uterus some five years previously. What makes the case remarkable is the difficulty of conceiving how such an instrument could find its way into the bladder without occasioning a disturbance which would render surgical interference necessary, long before it reached that cavity. The ring was removed through the dilated urethra and was found to be broken, the break supposed to have occurred during the removal. We would suggest the possibility that the ring was originally a catheter, which found its way through the natural channel and afterwards took the form described. This hypothesis would certainly seem more tenable than that of the "pessary."

Reviews and Bibliographical Notes.

INHALATION IN THE TREATMENT OF DISEASE; ITS THERAPEUTICS AND PRACTICE. By J. Solis Cohen, M. D., Lecturer on Laryngoscopy and Diseases of the throat and chest; in Jefferson Medical College, etc. Second edition revised and enlarged; p.p. 392. Philadelphia: Lindsay & Blakiston. Detroit: E. B. Smith & Co.,

The serviceability of inhalations in therapeutics is a question upon which there is by no means a unanimity of opinion. Probably the fact that travelling impostors have made such a hobby of this method, and have ridden it to the injury of their numerous victims has had much to do in bringing into disrepute. It, however, is doubtless a very important means in the treatment of diseases of the upper portions of the respiratory tract, and we are pleased to notice that Dr. Cohen regards it useful in consumption, more from its influence in increasing the respiratory power than from any effects the substance inhaled has on the parts effected.

The work is probably the most concise statement of what is known on the subject, extant. It consists of four parts—part I treating of the inhalation of airs, gases, vapors, and fumes; part II, of nebulized fluids or sprays; part III, of powders; part IV, of atmospheres. The various apparatuses used in inhalations are also described, and many of them illustrated by means of cuts.

A MANUAL OF GENERAL PATHOLOGY. By Ernst Wagner, M. D., Prof. of General Pathology and Pathological Anatomy in the University of Leipzig; Director of the Medical Polyclinic of Leipzig. Translated from the sixth German Edition by John Van Duyn, A. M., M. D., and E. C. Seguin, M. D., pp. 728. New York: William Wood & Co. Detroit: E. B. Smith & Co.

Messrs. Wm. Wood & Co. have placed the profession of this country under renewed obligations by the presentation of this

imitable work. The most popular text book in Germany and having passed through six editions in that country, the only wonder is that it has not been given to the profession of America before this. The propriety of calling a work of over 700 pages, and treating as fully as does this work the subject discussed, a "Manual" may well be questioned. The most cursory glance through it is sufficient to convince one of the excellence of the work which bears the imprint of one of the greatest German minds. Prof. Wagner is one of the most indefatigable workers of the present day. A gentleman who has sat under his lectures informs us that in addition to his professorial duties at the University of Leipzig, he spends from one to three hours daily at the Pathological Institute, and delivers numerous other lectures outside of his connection with the University. Besides all this his consultation practice is the largest in Leipzig. The bibliography of the work before us is very replete and evinces a research rarely entered into by authors.

The work consists of four parts devoted respectively to General Nosology, General \textcircumflex Etiology, General Pathology, Anatomy and Physiology and Pathology of the blood. Part second is peculiarly interesting. In this the influence of climate, soil, and water in the causation of disease is discussed. Bacteria, parasites, contagious miasma and epidemic influences are treated of, and the views of the author, together with those of the more advanced thinkers, freely given. Of the part played by these agents on which it is the tendency of some extremists to write with such an air of certainty, Prof. Wagner has the following: The infecting agent, the specific poison is not certainly known in any contagious or miasmatic disease. Various theories have been brought forward concerning the nature of this poison. Of these the so-called parasitic theory has found almost universal acceptance. It is, at least, the most probable. But investigations carried on for the last ten years, are, in spite of the declarations of observers, not yet so far removed from doubt, that the assumption of a so-called 'contagium animatum,' can be regarded as assured."

The translators have given us a very readable production, and as a whole, the work is one which makes any library not having it incomplete.

PHYSICIANS' COMBINED CALL BOOK AND TABLET. By Ralph Walsh, M. D., Washington, D. C.

This is a very convenient pocket companion. Its claim to advantage over other visiting lists consists in the fact that it may be used until full, irrespective of month or year, and that it contains an erasable tablet. Its size is adapted to the carrying of a bank note without folding. It contains also a tolerably complete dose list.

A SYSTEM OF MIDWIFERY, INCLUDING DISEASES OF PREGNANCY AND THE PUERPERAL STATE. By William Leishman, M. D., Regius Professor of Midwifery in the University of Glasgow, etc, with addition by John S. Parry, M. D., Obstetrician to the Philadelphia Hospital, etc. Second American from the second and revised English Edition. Philadelphia : H. C. Lea. Detroit : E. B. Smith & Co.

We have only to add to what we have said of this work in its first edition, that the present edition brings the book fully abreast of the times. The additions and notes by the American editor are useful, and show that his editorial duties have not been confined to mere proof reading. The additions are found chiefly in the chapter on the Use of the Forceps, Lactation and Puerperal Diseases. He has likewise added a chapter on Diphtheria of Puerperal Wounds, which supplies an important omission made by the author.

The work stands without a superior in any language—a fact which the rapidity with which the first editions (English and American) were exhausted, goes to prove.

THE UNITED STATES MEDICAL DIRECTORY.—A second and revised edition of this work is soon to be issued. Physicians who have commenced practice, or changed location during the past three years are requested to forward notice of such change to Dr. D. G. Brinton, office *Med. & Surg. Reporter*, Philadelphia.

Reviews and Bibliographical Notes. 281

METEOROLOGICAL REPORT, FOR MARCH. C. HENRI LEONARD, M. D., Observer.

BAROMETER.—Highest, 30.555; lowest, 29.076; range, 1.499; average, 29.979.

TEMPERATURE.—Highest, 62; lowest, 7; range, 57; average, 29.8.

WINDS.—Greatest velocity per hour, 33 miles; prevailing direction, west, (10 days N. W., W., 4 and S. W., 5; E., 5;) total number of miles "traveled," 6,646.

RAINFALL.—Eleven days, 3; cloudy 22; snow or rain on 20 days; total, precipitation 3.50 inches! In 1875 we had 3 inches; in '74, 1.55 inches; in '73, 1.79 inches; in '72, 1.22 inches; hence this has been a very remarkable month in this respect. The greatest amount any one day was 1.15 inches; this was on the 16th of the month.

MOISTURE.—Greatest amount present any one time, 3.99 grains to each cubic foot of air; this was on the 7th. Days on which 3 grains, or more was present to the cubic foot of air, 6th, 7th, 11th and 16th. The least amount was present on the 18th. At 9 p. m. of the 12th, 7 a. m. of the 16th, 7. a. m. of the 25th, 2 and 9 p. m. of the 28th saturation was complete; yet, on the 28th there was at no observation 2 grains of moisture to the cubic foot of air.

OZONE.—Present on 25 days; "traces" only were found on 6 of these; maximum coloration 3; this was found at the morning observation of the 27th; paper being exposed 28 hours; also found upon the morning and afternoon observation of the 29th, and the afternoon observation of the 30th; the "coloration" of the morning of the 30th being 2. The 16th the day of greatest rainfall gave 1 for ozone at 2 p. m., contrary to observations heretofore.

As spring advances there seems to be a gradual increase of the ozone in the atmosphere. Only once this month have I found any traces of sulphurous acid; upon the afternoon of the 11th the purple paper was very spotted (bleached), probably owing to the adhesion of coal soot to it. I found ozone to be most prevalent after brisk, breezy days, when a damp one has preceeded it. Do not the friction of the air currents have something to do with this as well as sunshine?

MORTALITY REPORT OF THE CITY OF LANSING FOR THE MONTH OF MARCH. From Statement by DR. H. B. BAKER.

DISEASES.		AGES.
Abscess.....	1	Canada..... 1
Confinement	1	Germany
Diabetes	1	Iowa..... 1
General Debility.....	1	New York..... 3
Inflammation of the Brain	1	Michigan
Inflammatory Fever.....	1	Lansing
Remittent Fever.....	1	Total..... 11
Typhoid Fever.....	1	Under five..... 3
Scarlet Fever.....	3	Over five and under ten..... 2
Total.....	11	Over ten and under thirty..... 0
Estimated population Mar. 15..8,512		Thirty and over..... 6
Deaths in March at annual death rate in 1,000..... 15.22		Total..... 11
NATIVITY.		
America.....	1	

*MORTALITY REPORT OF THE CITY OF DETROIT FOR THE MONTH
OF MARCH, 1876. Prepared from Statement furnished by C. H. BORGMAN,
Esq., City Clerk.*

I.—ZYMOTIC DISEASES.	
Congestive Chills	1
Croup.....	10
Diphtheria.....	2
Intermittent Fever.....	2
Measles	7
Remittent Fever.....	2
Scarlet Fever.....	2
Small Pox.....	1
Typhoid Fever.....	1
Typhoid Pneumonia.....	1
Whooping Cough.....	3
 Total.....	 32
II.—CONSTITUTIONAL DISEASES.	
Cancer.....	3
Childbirth	6
Consumption.....	27
Debility.....	11
Diarrhoea.....	2
Dropsy	2
Dyspepsia.....	1
Inanition.....	1
Insanity.....	1
Old Age.....	5
Puerperal Convulsions.....	1
K rheumatism.....	1
 Total.....	 61
III.—LOCAL DISEASES.	
Acute Laryngitis.....	1
Asphyxia.....	1
Bronchitis.....	1
Congestion of the Bowels.....	1
“ “ Lungs.....	10
Convulsions.....	19
Disease of Kidneys.....	1
Heart Disease.....	1
Hernia Femoralis.....	1
Hydrocephalus.....	3
Hæmoptysis.....	1
Inflammation of the Brain.....	3
“ “ Heart	1
“ “ Bowels	2
“ “ Lungs.....	22
Paralysis.....	1
Softening of the Brain.....	1
 Teething	 1
Total.....	71
Accidental.....	5
Found Dead.....	1
Stillborn	21
Suicide.....	1
Unknown.....	1
 Total.....	 29
NATIVITY.	
Detroit	126
Ireland.....	7
England.....	6
Germany.....	21
Canada	5
United States.....	22
Scotland.....	3
Prussia.....	1
Italy.....	1
Switzerland.....	1
 Total.....	 193
AGES.	
One year and under.....	71
Two years and over one.....	22
Three years and over two.....	8
Four years and over three.....	6
Five years and over four.....	5
Ten years and over five.....	10
Twenty years and over ten.....	9
Thirty years and over twenty...	17
Over thirty.....	44
Unknown.....	1
 Total number of deaths.....	 193
Estimated population.....	110,000
Estimated annual death rate in 1,000, from Mar. deaths	21.00
PER CENT. TO TOTAL MORTALITY.	
Zymotic diseases.....	16.60
Constitutional diseases.....	31.60
Local diseases.....	36.78
Under five years.....	58.03
Between five and ten.....	5.18
Over ten and under thirty....	13.47
Thirty and over.....	22.80

T H E
PENINSULAR JOURNAL
OF MEDICINE.

MAY, 1876.

Original Communications.

ADDRESS delivered by DR. J. H. BEECH, of Coldwater, at the Commencement Exercises of the Medical Department of the University of Michigan, March 29th, 1875.

DOCTORS—LADIES AND GENTLEMEN: I am happy to enjoy the honor of first—after the high authorities created by our sovereign State—addressing you by the honorable title which has been conferred before all of these witnesses, and by the presentation of sealed parchments, testimony thereof shall be borne to future generations.

Doctor! May you never forget the noble inspiration of its hoped for possession, the just pride which you individually feel in the realization that *you* are thus addressed, nor that devotional vigor with which you should guard the profession of your choice, and the fair escutcheon of your *alma mater* from spot or blemish. You have not *over-rated* the high character of your

aspirations ; we trust that you have not *under-rated* the responsibilities, the sacrifices, nor the laborious vigils incident to your obligations.

As you have beheld the great expenditures which have been made from the treasures of the commonwealth by appropriations of lands and monies, in the erection of edifices for your comfortable protection from fatigue and inclemency of seasons, in the accumulation of means of illustration, in the careful selection of men renowned for culture, and proficiency, in the several departments of science in which they have given instruction, you could not doubt the high estimation in which the wisest of the people hold your learning and your lives.

Can aught that I can do strengthen the lofty purposes of your souls ? Can any declamation of mine give additional force to the thrill of enthusiasm aroused by this day's ceremonies ? These nuptial rites which declare you the lawful protectors of science, and clothe you with a sacred veil which should circumscribe your gaze from simple sordid gain, have called together the aged and the honorable, the lovely and the beautiful, the intelligent and the thoughtful, as well as the inquisitive and the curious.

Can I wave a flag from my stand-point at the end of thirty-five years' blundering march through tangled paths, through inviting fields, over desert sands and refreshing rivulets, by threatening rocks and balmy dells, that shall cheer you on, and guide you to that glorious height, above which, " *Excelsior* " can never be written ? Nay ! verily, I fear not.

But perhaps I might exhibit a hasty chart of the daily journeyings, the halting places, deflecting paths, the " *doubting castles* " and *ignes fatui* which beset the way ; or like a guide-post point to paths which I have been unable to travel. I do not intend to perpetrate a sombre homily, at the expense of your time and patience, after your tastes have been cultivated by daily feasts of didactic eloquence for so many weeks ; still, we hope that you have composed yourselves for an infliction.

If you have not already determined what community needs you most, or will best appreciate your services, you will find healthful discipline in the delightful occupation of "prospecting." In our humble opinion, it makes less difference *where* you begin than *how* you begin. Of course common sense is as necessary in selecting a field as in working it, and not any more.

If the vicinity of your birth-place, or of the scenes of your youth, needs an honest, high-minded, industrious physician, go there, *and be one.*

No scoffs at your inexperience can injure you, if you exhibit science and not yourself, as most prominent. If there are "wild oats" there, which would embarrass your progress, keep clear of those who helped you to sow them; tread them down with the upward face of a hero, and the steady step of virtue. If the old shoes of idleness had laden your feet, until you were known as "slow bones" and "love-ease," carry back the energy which has impelled you whilst here; yea, more, carry back a memory of the busy men who have taught you here; and of those who, in all of the departments of this University delve in the depths of science, whether in health or illness—in happiness or heart-ache; and keep your feet shod with ambition so that they may quickly out-grow the old clogs. Unless you take this course in regard to questionable associates, old traits, faults, and foibles, it will be of little use for you to go anywhere, for your own presence will present the evidence of weakness. With the people "by-gones" will be "by-gones" unless kindred perverseness crops out in your future conduct. But the smoke of the parental chimney should of itself alone have no claim to circumscribe the energies of a citizen of the United States of America, nor of that broad republic of medical science, and beneficence to mankind, bounded only by uninhabitable zones.

It is well, as is said in common parlance, "to look for an opening," but be sure to so deport yourself, that when you leave, there will be "an opening" difficult to fill.

Having selected your location, neglect no reasonable oppor-

tunity of showing due respect to the character and opinions of those with whom you are to compete. You will probably find many of them but ill qualified to display their practical knowledge by words, and may consider yourself—perhaps justly too—their superior. If they have been fair representatives of their times, and are honestly doing the best that they are able to do—making no false or ignorant pretensions—you will help yourself most by learning the elements of their success whilst you strive to remedy and cover their faults.

You must not expect entire frankness, fair dealing, unblemished etiquette and cordiality from all. We “old fogies” know something of your superior acquirements, and it is *natural* to receive you with a shyness, and to criticise you as we deserve to be criticised ; but spare yourself the pains, for you have all of the advantage if you do not injure yourself by too loose a mouth in regard to your rivals.

You are prepared to enter upon a profession which receives the most enduring regard—and the most bitter abuse of any human calling. If you cannot hear flattery with cautious reserve, and bear unjust vituperation with the resignation of a martyr, you will often lose your self-possession, and commit follies. Treat the eccentricities of people and of fortune with magnanimity—steadily aiming at usefulness and rectitude.

Be ready to counsel in hygiene, and in political economy, so far as your knowledge and influence may reach, without compromising the claims of your profession ; showing that your degree of “ Doctor ” is not the mere symbol of a trade.

The choice, and arrangement of an office is a matter of more importance than you might suppose from inspections of the offices of the majority of established practitioners. Your rooms will, soon enough, get in confusion if you begin with scrupulous neatness and order. Expensive furniture is *not essential*, but some order which yourselves understand, *is essential*, to prevent accidents from haste, or loss of time from perturbation. If your books, boots, pocket-cases and instruments are often misplaced,

your customers will soon suspect that your wits are liable to similar misfortunes.

When you are not professionally occupied, have no lounging places ; let patients and messengers have the satisfaction of finding you where your home, or your sign is, and unattended by tell-tale idlers, or checker-players.

Keep your "eye single to" your profession. The allurements of speculation ensnare too many doctors ; and too often they slide between the prosperous conditions which might be enjoyed on either hand, "live in a salt sea of anxiety," deplored a custom-shrunk practice, and leaving an impecunious estate. This admonition does not include the making investments of your annual earnings where they will be augmented by the natural process of business, or advancement in values independent of the contingencies of your future brain-work.

One of the faults into which doctors are liable to fall, is talking of cases with non-professional associates. Do not fear that your skill will remain unpublished unless you draw attention to it by adroit remarks, or pretended casual allusions, to some of its incidents.

Above all, seal your mouth against the escape of any unguarded expression, or unpleasant circumstances which may have transpired in a sick-room, be it "never so fun-provoking." If unwise persons report or repeat them, let it get no strength by a word or a glance from you ; nor a chance to be imputed as a part of your conversation. A prudent companion will prefer that you tell at home nothing that could mar the confidence which your customers place in you, until it has got abroad from some outside source ; for, if watched or questioned by persevering news-mongers, some thoughtless observation, or an uncontrollable blush will betray knowledge which will be interpreted according to the fancy of any gossip present. Remember that the tongues of your non-professional friends are not bound by the honor which belongs to your office and station.

This reticence is not your duty in regard to premeditated

wrong, preventable crime, or the promotion of the just punishments of the law. The conditions of war, and arbitrations of the battle-field, are not the only circumstances which test the patriotism of the physician.

On the frontier of this active, useful, and enjoyable life, there are very loose ideas in regard to the rights of new-comers. A murderous horde of sanctimonious, or savage, "Danites" infest all ranks of society, encouraging the worst of evils, by their willingness to do atrocious villainy. The power to exist by a fair chance, and the help of God who gave being, confers no rights which these piratical knaves respect. Of *their* deeds you should not be reticent, and yet beware, lest in breathing your contempt, you advertise to the vicious and weak-minded their occupation. Spurn every attempt to induce you to enlist in such nefarious traffic, as you would spurn to commit any other assault upon the rights of your country, or the prosperity of our race. Let the sentiment of Hippocrates fill your soul, "The enemies of my country have not wealth or influence enough to purchase my loyalty."

Very much of your enjoyment in the pursuit of your profession depends upon the cultivation of easy address, and agreeable manners. I do not mean that the dancing school, or the courts of etiquette are to deserve your future attention; nor that you had better ape a fictitious polish, unnatural to you; but, that you can carefully avoid coarseness of expression and rough manipulation. Gruffness of demeanor may startle rustics, but your ways should be an improvement upon theirs. They may laugh, but will not admire your self-abasement. That portion of the people whose good opinion would profit you most, may for a short time tolerate general rudeness for the sake of utilizing known good qualities; but, much of the good which you could do, will be lost, and very many judge of all else by the external bearing and condemn at once. An untidy garb has hindered the prosperity of many a worthy man. It is *not* the mud-bespattered and toil-worn garment that gives offense to the sens-

itive inmate of the sick-room, so much as the evidences of habitual negligence in person and outfit. Such negligence has often driven patients from those in whom they could safely put confidence, to employ "popinjays," whose only merit was dress and palaver. It is pleasant to see how easy little children are made to think that the doctor is the nicest of mortals, and become docile and happy in doing all that can be reasonably asked of them; and still, some men are always ordering, frightening, and badgering little innocents, as if "a hearty cry" was expected to cure them. One of the most splendid surgical operators of Philadelphia thirty years ago, often made so much parade and bluster in preparing for an operation that the terrified patient would beg to be excused for a few moments or for the day, and the modest Parrish, unpretending Pancoast, or quiet Mutter, would get the case.

When you begin to feel confident of your popularity, do not grow tardy in attending to calls. Allow me to transmit the following advice, which I received from a quaint, but very dear friend, when I had got my diploma. "Now you are a doctor. "Get you a good horse, and a carriage that won't carry passengers "to lug the animal down, and *go along!* Don't let your horse, "starve to death on a short road."

Doctors are apt to fall into slack and uncertain ways in keeping and collecting accounts. To receive pay and support from the grateful and generous—and not demand it from the ingrate and niggardly, is unfair. Whilst writing this address a lady caller told of "a dear good old doctor," from whom a wealthy friend of hers, after annually for four years asking for his bill—cancelled the account for almost daily service to a growing family, with seventy dollars, and the doctor is not independent, nor an under-bidder for popularity's sake, but had been careless about making charges. Misplaced lenity is not charity.

We are informed that some members of this class have already been engaged in the practice of medicine. Allow me to compliment such for having taken this advance.

If circumstances seemed to have compelled you to assume the important responsibilities of physician too hastily for the clearness of your conscience, you have exhibited commendable self-esteem, and respect for the sacred trusts which you may receive, in relinquishing your revenue for a time and placing yourselves where your knowledge has increased, and has been put to the tests of comparison and examination. I congratulate you in your spirit of emulation, and in your success; and feel assured that your ultimate pecuniary gain will be appreciable—whilst the mental and moral satisfaction can scarcely be overrated. It would be a vast benefit, to both physicians and people, if every practitioner of every branch of the healing art, whether graduate or less fortunate, would enjoy an occasional jubilee season at some center of learning, to clear the cobwebs which festoon the path of routine from his vision; and revive active memory and thought. The most industrious reading cannot alone equal illustration in the laboratory, dissecting room, and operating theatre. We hope that this class will do justice to themselves in this matter, and set noble examples to their compeers. The expectation of occasionally “rubbing off the rust” by attending part of a course of lectures; or, following a few “rounds” at some hospital, should not excuse you from the regular reading of, at least three, medical journals, to wit: one, at least, of home interest, and as many of the highest general character, or devoted to the divers appropriate divisions of our science as it is consistent for you to peruse. In first reading, mark the meritorious articles, and parts of greatest practical value, for convenient re-perusal; fasten the numbers together in some way, at once, and in a short time you will have a *valuable*, perhaps not handsome, library—if circumstances prevent you from getting any other. Everybody says “keep notes of your cases,” and we are just like almost everybody, earnest to press the advice, but shamefully deficient in example. If you *will* be heedless and not keep a “case book” *in extenso*, keep memoranda in your diary, or account book, as you make your

daily charges, or record your cash receipts. I, myself, heard the learned Professor J. K. Mitchel, of Philadelphia, after many years of naval, and a large civil service, say that he had records of the leading facts, and many minute particulars of every case which had come under his observation—the counsel given, or the prescription made—and in a very large majority of several thousand in and outside of hospital and military records, the results of treatment, according to the best evidence that he could gather. By his carefully recorded facts numerically arranged he was able to show that a far greater proportion of successes crowned the labors of the physician than any other profession. Beginners in practice are apt to modestly think we shall never be so popular that our capacious memories cannot readily recall the important items of that which is at present making a powerful impression upon our mind; but it is surprising how soon memory is heaped overfull, and all is practically lost. Hod-full by hod-full laborers carry immense temples upon their shoulders, which would never rise if each little load were thrown over a convenient precipice.

My friends! remember that close investigation and carefully attained diagnosis, is exceedingly important in gaining the confidence of your customers; and *correct* diagnosis is “nine points” of success in treatment; hence, make it a rule to examine, even trifling cases, thoroughly. If time, or circumstances will not at first permit proper investigation, let it be *understood* that you prescribe for the most perceptible symptoms, and ask for a more favorable opportunity.

Proper and sufficient light is one of the most essential elements in examinations, and its best application to the case is very apt to be disregarded, lest the patient be put to inconvenience; or, lest we shall make the people say—“the doctor is fussy”—or, “he is putting on wise airs.”

Have what light there is fall directly, or reflected strongly upon the patient. A readily adjustable plane mirror, 8 or 10 inches in diameter, upon a heavy pedestal, so that you may set

it out of doors if necessary, to reflect sun-light through an open door or a window, will be one of the most useful articles of your furniture. Sun-light will sometimes make astonishing revelations, and is more readily attainable than powerful artificial lights. For examinations of the ear and nares, it is preferable to the best lamp that we have yet seen. The particular uses of light have doubtless been taught better than I could do, if teaching instead of hinting were my province.

Cultivate friendly relations with your rivals and neighbors. You have no right to be on such terms with any reputable practitioners that you cannot meet them in consultation, or have them called to assist you without "bristling up" and thinking of an old grudge, when the welfare of a human being depends on harmony and concentration of skill. Give no hearing to mischief-makers; and if you suspect that a professional neighbor misapprehends you, be in haste to explain, lest either may want the assistance of the other whilst there is enmity. Never appear to coincide in a course of treatment with mental reservation, and secretly shoulder the responsibility by pursuing a different course.

One great stumbling-block which has caused some physicians to lose confidence in real remedies, and wreck judgment and integrity by resorting to chimerical and absurd notions, is the use of cheap and uncertain drugs. We may as well put our earnings in a *faro-bank* as to send our prescriptions to an ignorant or dishonest apothecary; or to purchase and dispense that which has no known quality but cheapness or long credit. If you use only medicines of good quality, and with discretion, you will *never* trust your reputation, and the interests of your patients to false theories and "moonshine."

In no other part of the performance of the agreeable and complimentary duty of receiving this class to fellowship in our profession, and introducing you to this audience, who as proxies represent your future patrons, have we felt the embarrassment which we realize in addressing the ladies who belong to the

class. If it did not seem discourteous, we would excuse ourself, on the plea that your diplomas are without distinction—and your future callings are supposed to be in no essential manner different from—those of the gentlemen with whom you are this day associated. But such an excuse does not satisfy me. Although not strictly pioneers, you are early and honorable representatives of a popular movement to elevate womanhood upon the only proper basis, *i. e.* that of equal application and equal attainments with men. We will not claim that America has furnished the first educated women who have undertaken the practice of our profession, but we do maintain that in no previous time, and in no other country have the minds and customs of the people been so well prepared to give full scope to your powers, unprejudiced by superstition, and uninflated by visionary chivalry. It has been claimed that the general want of success of women in former times, and in other countries, to distinguish themselves in, or to greatly advance the science of medicine, and, the fact that by the governments of several nations well advanced in civilization, women have been forbidden to exercise the office of physician, were arguments against their being entrusted with a vocation involving such deep responsibilities. But it must be admitted that the facilities for thorough preparation have never heretofore equaled those of the present time, and especially the advantages enjoyed in our own glorious State. Within our borders, by perfectly uniting gradations, and unbroken class associations, the sexes travel the entire curriculum from the "primary school departments" to those of classics, law, or medicine, accustomed to compare mental acquisitions and mental powers—assimilated in the methods of reasoning—acquiring confidence by frequent competitions, and respect established upon tried merit, whereby we believe that your sex has the first opportunity ever given to fairly test the practicability of your success as physicians. That there are proper fields for your occupation, and for the use of the most profound learning which you have, or can acquire, must be admitted by every candid

critic. That none of you will ever be capable of throwing some light upon any of the vast varieties of questions which encumber our constantly progressive science, none would dare to say. To assume that success must mean to practice all the branches of the healing art with the principles of which you have made yourselves acquainted, is no more sensible than to declare that you must chop because you know that an axe is sharp. Because uneducated women are very liable to become the enthusiastic partisans of quackery, it has been feared that no amount of scientific culture would prevent the tendency to adopt medical vagaries; and, that the tone of professional character would suffer by woman's too susceptible credulity. This fear we trust it will be your good fortune to prove groundless. If you should prove more recreant to the confidence imposed by the bestowal of these diplomas, than the sex to whom they were formerly exclusively confided, may a kind Providence have mercy upon the people!

In the name of enterprise, and a spirit of self-reliance; in the name of those who desire to see the perfect elevation of American women; in the name of that part of humanity who believe that your sex is especially qualified to guide the suffering to solace; in the name of a magnanimous fraternity, who neither fear nor scorn to meet you on equal footing, aye! in the name of a gallant profession who, we believe, will cheerfully grant you especial courtesies, we welcome you to share our rank, and bid you God-speed!

If uneducated woman has been properly conceded to have a special mission to the sufferers in every hovel as well as palace; if she has properly won golden opinions in benighted lands; diadems of gratitude on embattled fields, and pæans of praise from noisome prisons; if woman by her own special gifts has ever favorably influenced public opinion, or assuaged public woes, how much more may be expected of your well cultivated minds with the enthusiasm and self-denial so common to your sex. Think how much has been accomplished heretofore by

women comparatively unarmed with the panoply of science, whilst you go forth as fully equipped as your masculine classmates, circumscribed somewhat, it is true, by popular doubts, but again notably favored by the delicate preferences of your own sex, who, as you doubtless desire, will be your chief confidents and employers.

It has been found consistent for you to receive instruction from the Medical Faculty of this University without compromising dignity or modesty, and we do not doubt that all of the proper relations of physician, associate physician, or professional council can be as appropriately conducted with your fellow practitioners. Our profession has not hitherto been backward in proper concessions to the gentle sex; we trust that our gallantry will not forsake us in coping with our graceful equals.

We have never hesitated to advise young doctors to enlist early in matrimony. As we are not sure that a woman can always find, or be found of, a suitable husband, we dare not counsel the ladies of this class upon the subject, but as it is always possible to find a good wife, we enjoin upon each of the gentlemen to secure a companion for life. A bachelor doctor is an abomination who should be tenderly manacled on the first leap year. Many general rules have reasonable exceptions—whether there are any such to this we are undecided.

We were recently surprised to read in an address of a distinguished head of a popular educational institution—not himself a medical scholar—expressions deplored the non-advancement of the medical profession. We could but exclaim,—SHAME on such obtuseness! Look back but the span of some living memories and note the life-saving, pain-assuaging, and cachexia-staying achievements of our profession. Behold variola in the past, sweeping myriads to her annual garner of rottenness and death, defacing every lineament of beauty in those who escaped with their lives, now entirely divested of its power to destroy, or to mutilate those who accept a simple harmless substitute. Listen for the shriek extorted by the surgeon's knife, or other

life preserving tortures. Lo! there is silence. In the sweet dreams of anæsthesia smiles play over the countenance, else distorted with agony. Aye, in the hands of our profession God has placed a mitigation of that primal curse, "In sorrow shalt thou bring forth." Read the histories of plagues and of pestilences of previous times, then blindly attribute to the vengeance of a merciful Creator, to the ungovernable influence of climate, or to the malice of demons, now understood and prevented by the discernment of our profession. Search the death records of battle-fields of yore, and compare them with the maimed but saved heroes that mingle to-day with our own communities, and with the population of Germany and France. Look at the triumphs of McDowell, Sims, Spencer Wells, Atlee, Syme, Simpson and Bowditch.

Read the obscure psychological dissertations of all generations previous to the present, and compare them with the essays of Maudsley, Hammond and others. Visit the insane asylums of the present, and compare them with the histories and traditions of mad-houses and filthy crazy-pens that used to pollute and disgrace the world. Take a retrospect of the histology of the days of the pupilage of living, acting seniors, and then glance at the demonstrations which the microscope has placed before every college class. Study the census of all preceding centuries and place the estimates of longevity by the side of the present. Taste the horrid crudities and compounds of our fathers and grandfathers, and relieve your disgust by sipping the same elements as eliminated by the chemist and clothed in nectar by the pharmacist who are guided by, and cater for our craft. Has agriculture availed herself in an equal degree of chemical science? Rake, if you can, from the ashes of the past, the armamentaria of the chirurgeon, and balance your freight bill with modern appliances. Tell us of other pieces of mechanism equal, in blessings yielded, to the hypodermic syringe, and the lithotrite! Are there improvements in laws, in traffic, in ~~belles~~ letters, in religions, in dress, or aught else, to compare with all these?

Contemplate the numbers of miserable victims of "weaknesses," so-called, dragging out painful existence, or filling early graves, *now*, by the help of advanced gynæcopraxia, bearing the bloom of vigor and beauty in every enlightened community. Test, by every physiological sense the purity and healthfulness of wounds and cutaneous disease, and of their homes and hospitals, under modern antiseptic methods of hygiene and treatment. The discovery of the pneumatic aspirator alone is worth more to humanity than that of *all* of the asteroids. The estimates of millions in the miles of distance to the sun, has no practical value compared with the counting of the millions of blood disks in healthy and diseased life-currents.

Who are these that are forcing open the minds of the people to the importance of ventilating homes, churches, school-houses, and all work, or assembly rooms? Who, but physicians, have exposed the ornamental deaths which fashion and fancy have been hanging about the forms of civilized households, and upon the walls of our domiciles?

Will the heroic explorer who may yet find the source of the Nile, or circumnavigate either pole, bless mankind as they who have traced the source of typhoid and yellow fevers, and circumscribed the progress of their infections? Who brings the forger and the murderer to justice but our brothers, trained in our institutions, the chemists, the analysts, and the microscopists, as they ply their wisdom upon the ink-trace or the blood-stain? What is the value of the magnetic telegraph compared with length of life to enjoy that with other blessings? What is the value of rapid transportation, compared with health of body and mind to profit by that and other bounties which Providence, science, and enterprise have placed within our reach?

Has the historian, the orator, the poet, or the musician of the present century given us greater boons of progress than the physician, in each and every department of his labor? We challenge comparison, with all of enlightened humanity for an umpire. We "magnify our office," and demand just recogni-

tion of the wonderful advance of recent legitimate medicine and its co-ordinate branches.

My newly graduated friends! you have embarked in our profession whilst a tidal wave of progress is bearing our hopes far above the highest floods of the past; let it be your single purpose to "be first among your equals." The responsibilities of your citizenship are augmented by the deference universally paid to those who worthily bear the title this day lawfully and formally conferred upon you. No trifling caprice, or stupid indifference to the general good, should mar the character of an American citizen, how much more should education, culture, rank, and title be made useful and honorable by the lives and deeds of a citizen consecrated to our noble work.

DOCTORS OF DENTAL SURGERY! I regret that I did not comprehend the idea of the conferring this degree at this time, so that I might have deliberately prepared a proper expression of the high esteem in which this advance of your profession is held. With the deep and broad foundation of thorough medico-dental education, upon which to develope the achievements of your art, we may well have great hopes of your future usefulness and high characters.

DOCTORS, ALL! Sit not down under the protecting ægis of your diplomas, but go forth to succor suffering humanity, to gather for yourselves laurels and wealth,—for your ALMA MATER and your profession, name and fame.

ACTION OF QUININE. By C. GEORG, M. D., Ann Arbor.

In a recent publication Prof. C. V. Schroff, has endeavored by experiments to decide conclusively whether the observed reduction of reflex excitability following the introduction of quinine, depends on irritation of Setschenow's reflex inhibitory centers, as claimed by Chaperon, or has no connection with a direct influence on the elements concerned in reflex activity, or, whether it depends on the disturbance of circulation caused by the poison.

Whether the pneumogastric be divided or not, an injection of 0.012-0.038 of quininæ murias in rabbits, or 0.165-0.18 in dogs, either into the external jugular vein (central) or into the femoral artery (peripheral) will reduce both the action of the heart and the arterial pressure. In dogs, the reduction of the blood pressure, after a single injection into an artery, lasts usually only from 3 to 5 min., when it again begins to rise, but it does not attain its former nerean. When the injections are repeated 3 or 4 times the collateral pressure sinks permanently from 20 to 40 Mmtr. Hg. i. e. to a point corresponding with that produced by division of the cord in the neck. In male dogs such rapid injections are frequently followed by death. Furthermore, since the heart's action, although almost constantly reduced in frequency, and is still continued with great energy, it becomes apparent that the deep sinking of the arterial pressure may be attributed to the action of the alkaloid on the vaso-motor nervous system. Schröff verified this hypothesis by actual observations. He observed that during the time of depression the arterial pressure could be raised only 4 to 5 and in the most favorable cases from 10 to 15 Mmts. Hg. by applying a galvanic current to the isolated sciatic nerve, whilst by the same means it could be raised to 80 Mmtr. Hg. before the introduction of quinine. Smaller quantities were sufficient to produce diminution of the excitability of the vaso-motor nerves, when injected into the carotid than when injected into the femoral artery. When the excitability of the vaso-motor nervous system is reduced by quinine, then the arterial pressure will not be augmented by suspension of respiration.

Having thus proved that quinine induces diminution of the reflex excitability of the spinal cord, Schröff next sought to examine the correctness of Chaperon's theory of the influence of quinine, on reflex action as mentioned above; it being of great importance to discuss the question, whether this theory was applicable to the muscles of the vascular system of mammalia, because it had to be taken into consideration, as long as the

contrary was not proved. In regard to the location of the reflex inhibitory centre in the brain of the mammalia, Simonoff states that mechanical or electrical irritation of the anterior lobes of the cerebrum is followed by considerable diminution of reflex activity, whilst irritation of the posterior lobes of the cerebrum, and also of the cerebellum yielded indefinite results. Schroff therefore divided the brains of the animals used in experiments as follows: The line of division, commencing on a level with the anterior border of the pons, extended obliquely into the posterior border of the corpora quadrigemina, or immediately behind these borders, and downwards a few millimetres in front or immediately behind the anterior border of the pons.

After poisoning dogs so far with quinine that the reflex excitability of the vaso-motor nerves was reduced to the lowest possible degree, he divided the brain in the above direction and re-examined the reflex excitability of the vaso-motor. Now, if the diminution of the reflex excitability of the vaso-motor nervous system depended on excitation of the reflex inhibitory mechanism—as taught by Chaperon—then after removing these centers the reflex augmentation of arterial pressure should be higher on irritating the sciatic nerve after, than before the division. The result did not verify this conclusion. Chaperon's theory being, therefore, at least not applicable to mammals. The reduction of the reflex activity by quinine depends solely on diminution of the excitability of the medulla and spinal cord, the brain remaining entirely unaffected. In regard to the question, whether this diminution of reflex excitability is primary, direct, or secondary, depending on diminution of the activity of the heart, Schroff points to the fact, that during the time when the reflex excitability of the vaso-motor nerves is reduced considerably, respiration to a minimum standard, the activity of the heart, although greatly reduced in frequency, manifests not only no diminution of energy, but on the contrary an increase of energy, as is observed by the augmentation of the elongations of the pulsations of the heart in the curve.

Ophthalmology and Otology.

THE CONNECTION BETWEEN EPILEPTIFORM PHENOMENA AND DISEASES OF THE EAR.* By PROF. MOOS, M.D., Heidelberg.

The diseases of the brain, its appendices and coverings as well as the nerves which it sends to the periphery, so far at least as they occur as complications in diseases of the organ of hearing, may be divided into two groups :

In the *first* group may be placed those diseases of the brain, etc., which are to be regarded as the result of a direct passage to it of an inflammatory process, whether they are brought about by certain anatomical predispositions, as, for example, through smaller or larger osseous canals, which are present in the normal condition of the bone, or through natural perforations in its substance, the so-called dehiscences, or through carious openings, etc. All such complications have nothing, in the main, very striking, and therefore we shall not consider them at this time.

In the *second* group we may place all those disturbances in which we are forced to suppose, according to the present status of nerve-pathology, that certain conditions of irritation in the external, middle, or internal ear are coveyed centripetally by means of the nerves distributed to them, to the brain, and there produce processes which are manifested again peripherically, in the most varied clinical forms, modified by the smaller or larger group of nerves, by which the original irritation was conveyed to the cerebral center :

These may be called simply *reflex-neuroses*.

Originally, long before the designation *reflex-neuroses* was generally accepted, both recognition and description were given to those disturbances which are produced by irritative conditions in the external auditory canal, as, for example, those which are the result of foreign bodies from without, of sequestra which

* A lecture delivered on May 1st, 1875, at Heppenheim, before the Society of Alienists of South-western Germany.

have worked their way from the temporal bone, and have at last become wedged in the external auditory canal, or of new formations in close contact with the walls of the auditory canal. These reflex disturbances consisted in attacks of sneezing, coughing, vomiting, etc., which were always correctly referred to the irritative presence of a foreign body in the external auditory canal, first, because their occurrence could easily be explained on anatomical and physiological grounds, based upon the distribution of branches of the vagus and trigeminus to the external auditory canal; and secondly, because all these attacks ceased, even after lasting for years, after the removal of the foreign body from the auditory canal.

An examination of the literature of published cases shows that we can arrange the complicated reflex disturbances which occur in certain diseases of the ear, in three classes, viz.: Reflex epilepsy, reflex hemiplegia, which often occur together, and reflex psychoses.

To the cases of reflex epilepsy belongs that of Fabricius Hildanus, which furnishes a case of simultaneous atrophy of one arm, and anaesthesia of one-half of the body. Recovery followed the removal of a glass-ball from the external auditory canal, where it had reposed eight years.

A similar case is given by the Scotch physician, MacLagan. Other cases of partly epileptic and partly tetanic attacks, resulting from inflammatory diseases of the ear, and disappearing upon cure of the aural disease, have been published by Hughlings Jackson, and by Koppe and Schwartz. I published, too, twelve years ago, a case of epileptiform and tetanic attacks occurring in a patient suffering from purulent inflammation and caries of the ear. But the attacks ceased only subsequent to the publication of this case.

Hillairet, and Handfield Jones saw, as a result of the presence of insects in the external auditory canal, epilepsy with hemiplegia, which attacks, by the removal of the insects and the irritation in the external auditory canal, were either instantly cured or very soon ceased.

Very recently Koppe published accounts of two cases of psychosis, which he very correctly has termed reflex psychosis, and which he completely cured by attention to and treatment of the disease of the ear, which was present.

In addition to this short review of the literature of the subject, which makes no pretension to completeness, I take the liberty of communicating to you the account of a case of reflex epilepsy, resulting from disease of the ear, observed by me last year.

Wilhelm Halter, 8 years old, from Rohrbach, was for the first time brought on the 14th of July, 1874, by his mother, to the clinic for ear-patients. It was stated that the patient had suffered from time to time, for two years, with earache and aural discharges; the hearing had become greatly reduced, and his mother admitted, upon being questioned, that the deafness had probably lasted for a long time. The following history was carefully obtained:

Every month or two the patient had suffered with earache on the right side, which had always ceased after a purulent discharge was established, and sometimes stopped without any discharge.

Very often these attacks of earache lasted as long as 8 days, day and night. In the interim, every three or four weeks, the patient had attacks of unconsciousness, which were ushered in regularly with great sleepiness and great diminution of the hearing, and sometimes vertigo, headache, and palpitation of the heart.

These attacks of unconsciousness lasted from 2-3 hours, during which the patient did not fall, and had no convulsions, but remained unconscious and speechless, his gaze being fixed.

The still greater diminution of hearing was so marked in the later stage of the disease, that when it occurred the relatives of the child predicted one of the attacks just described with invariable certainty. The attacks disappeared with vomiting, and then consciousness returned. It was further ascertained that the patient's brother, a lad fourteen years old, with normal hearing, was dull

witted, and that a brother of the mother had had the "falling disease" (epilepsy), but died at 28 with consumption.

The objective examination gave the following :

On both sides the membranæ tympanorum were considerably drawn in, and they appeared tightly stretched over the promontory. The short process of the hammer and the posterior fold of the membrana tympani were sharply prominent, and the manubrium appeared perspectively foreshortened.

These appearances indicated a long-continued closure of the Eustachian tube, which, by cutting off the ordinary supply of air from the tympanic cavity, caused a part of the air contained in the drum to be absorbed, while the remaining part was rarefied, so that the usual atmospheric pressure within the drum-cavity ceased while the pressure of the air without remained the same. Hence the membrana tympani and the chain of auditory ossicles were forced inward, the entire sound-conducting apparatus more stretched, and in consequence of its diminished vibratility, and the increased pressure in the labyrinth, a frequently enormous diminution in hearing was brought about.

In fact, at the first visit, intense hardness of hearing was discovered on both sides.

Speech was understood on the right side only 4 ft., on the left only 2 ft. A watch, heard normally 12 ft., was heard on the right side, 3 in., and on the left, 1 in.

Further examination revealed an excessive catarrhal disease of the nares and naso-pharyngeal space, which was probably the origin of the entire disease.

The treatment, until the 20th Feb., 1875, consisted in the use of Weber's nasal douche and at times inflation of the middle ears, by means of which entrance was effected to the left tympanic cavity, but on the right side it was necessary to perform paracentesis of the membrana tympani on 10th Oct., 1874, and 16th February, 1875, as on both occasions it was impossible to render the Eustachian tube pervious.

Since the begining of the treatment, on the 14th July, 1874,

until 20th February, 1875, there was no earach, nor were there any of the epileptiform attacks. I saw the patient, for the last time on 17th April. Hearing was almost normal. There were no more epileptiform attacks, although all treatment ceased after 20th February, 1875. All these statements were corroborated by the mother on the 27th April.

From the above history, it is very evident that the patient was affected by a twofold disease, firstly, by a catarrhal affection of the naso-pharyngeal space and the middle ear, which arose to a painful inflammation in the tympanic cavity, every four or eight weeks ; and

Secondly, he was subject to attacks which we may term, briefly, *epileptic*.

The prodromes of these attacks consisted in an increase of the hardness of hearing, in regular onset of sleepiness, in occasional palpitation of the heart, headache and vertigo, and the attacks themselves were characterized by fixed gaze, speechlessness and unconsciousness for 2-3 hours, terminating regularly in a return of consciousness, with vomiting.

The vertigo and vomiting in this case are not to be considered as symptoms of epilepsy, but are wholly due to the aural disease, for it is very plain that by the unilateral pressure upon the membra tympani and ossicles of hearing, the pressure in the labyrinth was increased, which, by being conveyed to the cerebral space, very often produces vertigo and vomiting.

Having accounted in this way, however, for the vertigo and vomiting, there still remains a set of symptoms which, although there was an absence of convulsions, must be called *epileptiform*, or *epilepsia incompleta*.

As the attacks ceased after a purely local treatment, and have not reappeared after a lapse of about nine months, the *post hoc* must be admitted to be *propter* in this case, and, consequently, we are justified in supposing that in this instance there was an intimate connection between the disease of the ear and the epileptiform symptoms. The next step should be an explanation of this connection.

The starting-point of the disease I find in the inflammation of the tympanic cavity ; this inflammation brought about a condition of irritation of tympanic plexus ; this condition of irritation communicated itself to the brain, and produced there the described attacks, favored by the hereditary tendency already mentioned.

While I offer this explanation, I also wish to say that I shall be very thankful to any one of you who can offer a better solution, and I shall also gladly adopt any better way of explaining the case. But if you do agree with me, you will also see the significance of the facts in this case, and its importance, not only for neuro-pathologists, but for the physician interested in diseases of children. For inflammatory affections of the drum-cavity occur very often in childhood, and we also know that many cases of convulsions in children cannot be explained. Further observations will show whether we are not, in many instances, justified in ascribing these to a disease of the ear.—*Archives of Ophthalmology and Otology.*

EXTRACTION BY PERIPHERIC FLAP. By L. DEWECKER, M. D.
Paris. Translated from the French by A. G. SINCLAIR, M. D.,
Detroit, Ophthalmic and Aural Surgeon to Harper Hospital.

It has been demonstrated that with the old classic operation of Daviel even the most skillful operator is unable to avoid immediate and complete failure in ten per cent. of his cases, and that in fifty per cent. vision is obtained only at the cost of a second operation.

In order to obviate these disadvantages, inherent in the operation, on the one hand, the section has been removed from the cornea to the sclero-corneal junction, as in Jacobson's method, and, on the other, a complete change has been made in its form, giving it an almost rectilinear course, after the manner of Graefe.

These modifications, the principal purpose of which has been to secure a better co-apтation and cicatrization of the wound

have had the fortunate result of reducing the immediate losses to 5, and even to 2 per cent., and the imperfect results to the half of that following the procedure of Daviel; and hence linear extraction has latterly taken precedence of the old method, notwithstanding the fact that it necessitates a permanent enlargement of the pupil by the excision of a portion of the iris.

The safety of cataract extraction has thus been greatly augmented, while the perfection of the result has been somewhat diminished. Attempts have been made to avoid the necessity of combining the formation of an artificial pupil with linear extraction, by making the linear section in the cornea, but these efforts have not been very successful, because they replace the incision in the same unfavorable conditions for cicatrization which occur in the method of Daviel; and although, on account of its linear form, the co-apartition of the lips of the wound may be more nearly perfect than in the flap section, it is, in many cases, impossible to prevent prolapse of the iris, and its inclusion in the wound—accidents which constitute one of the chief dangers attending the old operation.

A perfect operative procedure must then supply the following *desiderata*:

- I. The section must be placed in the most favorable conditions for co-apartition and cicatrization; it must, therefore, occupy the Sclero-corneal junction.
- II. The section must permit the ready and complete escape of the crystalline lens, *without enlargement of the pupil*.
- III. Peripheric sections, being more liable to prolapse and adhesion of the iris than any other method of operating, these accidents must be guarded against.
- IV. The inevitable occurrence of so considerable a number of failures must not be the price of certain advantages in the successful cases, as is the case in the operation of Daviel.

These desiderata it appears to me are supplied by the following procedure:

FIRST STAGE.—The assistant raises the upper lid

with his finger, or a small elevator, and the operator, having grasped the eyeball with fixation forceps near the centre of the inner margin of the cornea, makes the incision very accurately through the upper third of the sclero-corneal junction. There will thus be formed, in a cornea of twelve millimetres diameter, a flap of four millimetres in height, and of about eleven millimetres base.

If the iris do not rise over the edge of the knife when the counter-puncture is made the operator dispenses with the fixation forceps, and completes the section without forming a conjunctival flap. This accomplished, the elevator is withdrawn, and the lid lowered to its normal position.

SECOND STAGE.—The lids are carefully sponged with cold water, and the patient allowed a short rest. The operator, elevating the lid himself, proceeds to the opening of the capsule of the lens which is accomplished by means of the ordinary cystotome.

THIRD STAGE.—The assistant again raises the upper lid, and the operator, at the same time that he urges the crystalline lens towards the wound by making pressure through the lower lid and cornea, depresses the inner lip of the wound and the sclera over the insertion of the iris with a slender caouchouc spatula in such a manner as to free the lens from this membrane, in which, otherwise, it is liable to become involved when on the point of making its exit.

FOURTH STAGE.—The pupil is freed from any cortical masses which may have remained in the eye by pressing them towards, and through, the wound by a gliding movement over the cornea from below upwards, made through the lower lid. During this process the iris requires the same attention as in the second and third stages of the operation. When the eye has been freed from all remains of the cataract, if the iris have prolapsed and do not of itself recede through the incision, the prolapsed portion is reduced by passing a small spatula edgewise through the wound and gently pushing the membrane before it.

FIFTH STAGE.—The prolapse having been returned to the anterior chamber, two or three drops of a solution of neutral sulphate of Calabar bean (5 centigrammes to 10 grammes) are instilled into the eye. Having waited until the myotic action of the drug is produced, the pupil being fully contracted and the iris no longer evincing the least tendency to rise toward the incision even when the patient directs his eyes downward, the compress bandage is applied, and the patient allowed to rise and proceed to his bed.

It is prudent to remove the bandage one or two hours after the operation and re-instill the myotic if its action be not already well-marked. By the employment of so strong a solution a degree of myosis is produced which lasts at least twenty-four hours, a sufficient time for closure of the wound, and mydriatics may then be resorted to without danger of the iris becoming involved in the cicatrix.

Proceedings of Societies.

THE MEDICAL SOCIETY OF NORTHERN MICHIGAN.

The eighth regular meeting of this society convened at the office of Dr. Fred B. Wood, in the city of Big Rapids, on Tuesday April 11. Dr. W. W. Bowes, the President, in the chair. Present—Drs. Wood, Phelps, Bigelow, Hendrix, Martin, Dowman, Bowes, Badger, Ford, Wilkinson, Avery, and Herrick. Applications for membership were received from H. B. Ranney, of Stanton, Chas. White, of Paris, and R. F. Dundas, of Clam Lake, and referred to the Board of Censors, who reported favorably upon the names of Drs. Chas. White and R. F. Dundas. The name of H. B. Ranney, of Stanton, was objected to on the grounds of his absence and from the fact that he was reported by members of the Society not to be in good and regular stand-

ing. Moved and carried that this application be laid upon the table. Drs. White and Dundas were admitted.

Dr. Wilkinson, of Paris, reported a case of Stricture of the Urethra, in which, after repeated attempts and failures to pass an instrument, the bladder being distended with urine at the time, a puncture was made just above the pubes with a straight trocar, and the urine drawn off through the canula. His reasons for operating above the pubes, instead of through the rectum, were that he had no curved trocar, and there was none in the village. He believed, moreover, that now he prefers the operation above the pubes to the other. The patient is doing well at this date, six days after the operation, and is passing his urine through the natural channel. After the urine was drawn off the catheter was easily passed.

Dr. Martin reported a case of Fissure of the anus, treated and cured with iodoform. He remarked that he believed an operation unnecessary if surgeons would first use this medicine. He considered it almost a specific.

Dr. Hendrix also seconded the use of iodoform in all indolent ulcers.

Dr. Herrick reported in writing a case of Paralysis, the interesting features of which were ; 1st, the slow onset of the disease ; 2d, the previous weak condition of the patient, and the fact that he lived in a room the walls of which were covered with paper having a large amount of green in it.

Dr. Hendrix presented a little girl with some trouble of the thigh, and Drs. Avery, Phelps and Martin were appointed to examine the case. They pronounced it a case of necrosis of the femur, and recommended an operation for its relief. Dr. Phelps presented a man 35 years of age with an affection of the abdomen. Drs. Bigelow, Wilkinson, White, and Herrick were appointed to examine the case, and reported enlargement of the spleen, also a tumor of obscure character situated in the right inguinal region which was believed to be fibroid. Dr. Phelps states that he also believed the man had some organic disease of the

heart. The case was discussed by Drs. Martin, Wilkinson and Herrick. Dr. Martin regarded Iodide of Potassium as indicated; Dr. Wilkinson thought Quinine would fulfil more indications than Iodide Potassium; Dr. Herrick said that as the enlargement of the spleen came from malarial causes. Quinine was indicated, but believed that Iodide of Potassium was almost as essential; bi-iodide of mercury ointment for external application.

On motion of Dr. Avery, seconded by Dr. Martin, a committee was appointed to draft resolutions on the relations sustained by the Medical Faculty towards the Homœopathic Department of the University. Drs. Wood, Wilkinson and Avery were appointed by the chair as such committee. The committee presented the following:

WHEREAS, The Board of Regents, acting under the authority of an act of the Legislature, has established a College of Homœopathy as a department of the University, and

WHEREAS, Certain Professors have seen fit to retain their positions in the Medical Department, therefore,

Resolved, That this society deprecates any action on the part of any portion of the medical profession of this State calculated in its nature to impair the usefulness and influence of the Medical Department by casting any direct or implied censure upon the Professors who have chosen to remain in the University as teachers of medicine and surgery.

Dr. Herrick moved, and Dr. Phelps seconded the motion, that the resolution be accepted.

Dr. Avery said he was in favor of the resolution, and believed that the persons who were raising the cry against the University and the Professors who chose to retain their seats there, were interested in attempting to pull down the Medical Department of that institution, that they might build up another medical school on the ruins of the old one, and hoped the profession of the State would not lend their aid to any such scheme.

He was followed by Drs. Bigelow, Wood, Dundas, Phelps,

Martin, and Herrick, all of whom spoke in favor of the resolution. The motion was then put and carried with only *one* dissenting voice.

On motion of Dr. Wood, seconded by Dr. Herrick, a copy of the resolution was ordered to be sent to the Faculty of the Medical Department of the University, and one to the PENINSULAR JOURNAL OF MEDICINE for publication.

A motion was then made by Dr. Phelps and seconded by Dr. Martin, that the following resolution be passed by the Society upon the departure of Dr. Chas. F. Morgan for Stamford, Conn.:

Resolved, That we tender to Dr. Chas. F. Morgan, late a member of this Society, our sincere regret at the loss of so worthy and esteemed a member, and express the earnest wish that he may be as successful in his new field of labor in securing the confidence of the public and the esteem of the profession, as he was during his stay with us.

The resolution was adopted.

Typhoid fever was chosen as the subject for discussion at the next meeting of the Society, with Dr. Dowlman to open. To report cases in writing: Drs. Ford, Dundas and Badger; Essayists: Drs. Wilkenson, Herrick and Sheldon.

Society adjourned to meet in the city of Greenville, on Tuesday, July 11th, 1876.

The Society held a public discussion in the evening on the subject of Alcohol, before a large audience, who were evidently interested from the earnest attention they gave. Dr. Wood read a well written essay upon the effects of alcohol in large and small doses. He was followed by Drs. Martin, Dowlman and Avery, in short but instructive addresses.

O. E. HERRICK, *Secretary.*

MICHIGAN STATE BOARD OF HEALTH.

The annual meeting of the Michigan Board of Health, ^{was} held at Lansing April 11, 1876. There were present Drs.

Hitchcock, Kedzie and Baker, Rev. Mr. Brigham, and Rev. Mr. Goodman.

The President made an annual address, and treated of some of the achievements of hygiene, their economic relations in the State, and the means for future achievements. He showed the increase in the length of human life since the commencement of the Christian era, which he claimed was due to progress in hygiene. The average longevity in Geneva, Switzerland, was in the 16th century, 21.21; 17th century, 25.67; 18th century, 33.62; 1801 to 1833, 39.69; 1814 to 1833, 40.68.

In the 16th century 25.92 per cent. of the children died in their first year; in the 19th century the deaths at this age were reduced to 15.12 per cent. In the 16th century 61.11 per cent. and in the present century only 33 per cent. perished before they reached 20 years. In the first period 3.08 per cent. passed three score and ten years, and in the latter 17.94 per cent. had that length of life. As large a proportion now live to 70 as lived to 43 three hundred years ago. Statistics taken from the reports of the registrar general of England show the saving of life in London caused by the progress of civilization and of hygiene. The yearly death-rate was: 1660 to 1679, 80 per 1,000 inhabitants; 1681 to 1690, 42.1; 1746 to 1755, 35.5; 1846 to 1855, 24.9; 1871, 22.6.

Taking the number of deaths in Michigan during 1871 as 18,094, as shown by the vital statistics of this State, he concludes that 5,332 of these were from miasmatic causes, and one-half of them might have been prevented. By these deaths from miasmatic causes he claimed a money loss to the State as follows: For the last sickness of these persons, including loss of time, \$50 each, funeral expenses on an average \$25 each, making a loss to the people of \$399,000. He believed that these persons died sooner than they should by an average of ten years, and that half of those years might be said to be years of effective life. The State then lost 26,660 years of effective life, which cannot be estimated at less than \$150 per year, giving a loss of

\$3,999,000. English statisticians have estimated that for every death two persons are constantly sick. Thus for every death from the causes under consideration it is probable there are two years of sickness from the same causes, or 10,664 years of sickness. Counting one-half of these years as in the effective period of life, the money at \$150 per year is \$799,800. The cost of this sickness in nursing, medical attendance, and loss of time will amount to \$2,132,800. All the items make a grand total of \$7,331,500, and one-half of this sum he considers might have been saved to the people of Michigan in the year 1871.

He claimed that the deaths from small-pox should be reduced in the future by more thorough vaccination. He believes it the solemn and imperative duty of every physician and hygienist of every local board of health to give the idea that scarlet fever is a dangerous, contagious, and almost wholly preventable disease. This idea should be given a wide circulation. He mentioned a long list of diseases, and the means to be used for their prevention.

He mentioned the influence of certain growing trees in preventing miasmatic diseases, especially the blue gum of Australia, which is cultivated in Europe, California, and the Southern States, and suggested that in this centennial year it be tried in Michigan.

The most available and successful means for the accomplishment of the work of the hygienist is the careful collection and compilation of facts. Reliable vital statistics must of necessity be the basis of the work. He quoted from Buckle, who says: "Statistics, as a branch of knowledge, have already thrown more light upon the study of human nature than all the sciences put together." He urged upon the board most persistent effort to secure more complete vital statistics from the people of Michigan.

He urged the election or the appointment of an efficient health officer in every city, village, and township in the State.

He also suggested the appointment of a commission to collect facts relative to the injury to public health through the use of intoxicating liquors.

So much of the President's address as related to the influence of vegetation upon health, was referred to Rev. C. H. Brigham, Committee on that subject, so much as related to the vital statistics to Dr. Baker, Supt. of Vital Statistics, and so much as related to the appointment of a Commission to investigate the influence of alcoholic drinks, was referred to the Committee on Legislation.

There was a lengthy discussion on illuminating oils, and their thorough inspection for the public safety.

Dr. Hitchcock made a report on criminal abortion, which called forth considerable discussion. He urged some changes in the present law, to do away with the term "quickened," and to call all abortions deaths to be investigated by a coroner, as suggested by Drs. Beech and Stoddard of our State.

The Secretary read an annual report which gave in detail the amount and kind of property on hand, of that which had been received, issued, and used by the Board during the year, and also gave a classified financial statement. The Secretary also read a report relative to a portion of the work done in the office since the last meeting, which showed, among other things, that about 55,000 documents on "Treatment of the Drowned" had been distributed to the school population of Michigan, and that blanks for a special report for the quarter ending Dec. 31, 1875, had been sent to the 1,185 clerks of local boards of health in the State, many of whom have filled out and returned the same.

A communication from Lyman P. Alden, Supt. of the State Public School at Coldwater, relative to the occurrence of over 100 cases of sickness at that institution, out of about 230 inmates, including 80 cases of measles and 30 of pneumonia, was read. After some discussion the subject was referred to Dr. Arthur Hazlewood, with the request to investigate the cause of the unusual sickness, and report to the Board at its next meeting.

The Secretary offered the following which were adopted :

Whereas, The Signal Service Bureau of the United States has demonstrated its great usefulness in securing benefits to public safety of life in this State, particularly to the large number of persons employed upon or journeying over the great lakes, and in promoting health through better protection of cereal and other food crops because of its warnings, and also through the valuable data for the study of the relations of health and of diseases to the climatic conditions, knowledge of which is essential to an avoidance of causes now statistically shown to be of great influence on the death rate ; therefore,

Resolved, That the hope be expressed by this Board that the means of usefulness of the U. S. Signal Service Bureau be in no way abridged, but rather increased ; that it be permanently organized, and that its sphere of labor be enlarged, especially in the direction of obtaining and recording meteorological data bearing still more closely upon important questions relating to the public health.

Resolved, That, although not essential in connection with its work for the prediction of storms, it is desirable for purposes of progress in public health that we have at least monthly statements of the absolute humidity of the atmosphere, and of the exact atmospheric pressure at different stations (not calculated to sea level as required for other purposes), and that it is also desirable that observations on Ozone be recorded.

Resolved, That in the opinion of this Board such an enlargement of the means and labor of the Signal Service as is contemplated in the foregoing, will add to its present acknowledged usefulness, and is desirable in the interests of public health in this State.

Resolved, That the secretary of this Board be directed to forward a copy of the foregoing preamble and resolutions to the Chief Signal Officer of the United States, and to each of the members of Congress from this State.

Dr. Baker introduced a resolution, which passed, for a circular to correspondents of the Board asking reports of cases and definite information bearing on that dangerous disease, scarlet fever. He also introduced another resolution, which was adopted, aiming to do for the prevention of scarlet fever what the Board has done for the prevention of drowning ; that is, to place before the people in a condensed form the best preventive methods.

Communications were read and referred to appropriate committees, relating to typhoid fever, also to school recesses, to

water supposed to cause disease, to the establishment of meteorological stations, etc.

Replies of correspondents relative to diseases prevailing in this State during the year 1875, were referred to the Secretary, with authority to have the same published in the next annual report.

The Secretary in mentioning that the "Rules and Regulations" recommended by this Board had been commented upon in the London *Sanitary Record*, said that they had been favorably noticed, except as regards two points, one was an objection to the rule recommending vaccination before two years of age, the editor preferring the three months' limit adopted in England. The other related to the frequency of vaccination.

The Board requested Dr. Kedzie to attend the meeting of the public health section of the American Medical Association in June next.

WAYNE COUNTY MEDICAL SOCIETY.

DETROIT April 26, 1876.

A regular meeting of the Wayne County Medical Society was held this evening at its rooms, 72 Fort St. west. The president occupied the chair.

Dr. Harlow reported three cases of typhoid fever, and two of pneumonia. Dr. Jamieson reported the prevalence of influenza characterized by a profuse watery discharge from the nostrils, with headache. Quinine in two-grain doses was successful treatment. Dr. Rouse spoke of a catarrh which had existed somewhat as an endemic in his section of the city. He had likewise seen several cases of erysipelas. The president called attention to the existence of small-pox in the city. Dr. Brown did not regard small-pox as "existing" in the laity's acceptance of the term. A few cases always exist at this season. Dr. Harlow remarked on the prevalence of the disease in 1873, and on the manner in which it was stamped out by the thorough vaccination instituted at that time. Thinks the authorities

should adopt the same system of thorough vaccination at the present time. Dr. Klein did not regard the disease as existing epidemically, and had passed through no epidemic of small-pox in Detroit since 1846. Since then there has probably always been a few sporadic cases. Dr. McKeown remarked that the disease prevailed to a sufficient extent to stir up the community to the necessity of vaccination. The president thought that the existence of a single case in a community not thoroughly vaccinated should occasion alarm.

Dr. Jameison read a paper on "Physicians dispensing their own medicines," in which he advised the custom, which he thinks is coming into more general use than formerly, of physicians compounding their own medicines.

The paper elicited a discussion in which the views advanced in the paper were pretty generally endorsed. Dr. Kaiser was appointed to open the discussion of the subject at the next meeting, and "Vaccination" was selected.

The Society elected Dr. Mulheron, the president, a delegate to the meeting of the American Medical Association, and empowered him to appoint the remaining members of the delegation, which he did by naming Drs. Gustin, Heaton, Kaiser and Christian.

The following resolutions were then read by the secretary, and were on motion adopted, after a somewhat spirited discussion, with only *one* dissenting voice :

WHEREAS, The Legislature of Michigan has made an appropriation for the support of two Homœopathic professorships at the University of Michigan, and the Board of Regents has seen fit to accept said appropriation with the conditions attached, and

WHEREAS, The Faculty of the Medical Department of the University has seen fit to endorse the action of the Legislature and Board of Regents by retaining their respective chairs; therefore, be it

Resolved, That in the course which the Faculty has pursued they have acted with wisdom, intelligence and moderation; that this course is the one which, if persevered in, will work the greatest ultimate good to the profession.

Resolved, That the profession should make the course of the Faculty its course and endorse and aid them in their present attitude to Homœopathy.

Dr. Leonard, the secretary, introduced a series of resolutions commending the United States Signal Service, and urging upon Congress the desirability of increasing its efficiency.

The Society then adjourned.

C. HENRI LEONARD, *Secretary.*

J. J. MULHERON, *President.*

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

THE MORPHIA STRENGTH OF OPIUM AND ITS TINCTURES.

In view of the fact that the per cent. of morphia in legitimate opium varies from three to twenty per cent. and that the opium of commerce is liable to adulteration by producers and by dealers, it is desirable to keep informed, by repeated determinations, how closely the actual value of opium in use approaches to our pharmacopeial requirement of, at least, 10 per cent. of morphia in the dried drug. The analyses, reported in Fluckiger and Hanbury's *Pharmacographia*, of samples of veritable opium from all parts of the world, range all the way from 2.2 to 22.88 per cent. of morphia; 92 samples from Asia Minor averaging over 10 per cent. At the Vienna Exposition, of the opium of nine countries, that of China was the weakest, 3 to 6½ per cent., and that of Silesia and Wurtemberg the strongest, 12 to 15 per cent. of morphia,—the best Persian and Asia Minor giving 10 per cent. One sample from Asia Minor had no morphia.¹

Last year, J. Clark Moss, P. C., obtained five samples of opium at as many dispensing stores (in Michigan and adjoining

(1) *Pharm. Centr.*, 1873, 297 : *Proc. Am. Phar. Assoc.*, 1874, 140.

States), and determined the morphia and the moisture, with the following results.²

	Water.	Morphia.
No. 1.....	9.84 p. c.	8.94 p. c.
" 2.....	5.80 "	7.56 "
" 3.....	7.26 "	10.92 "
" 4.....	9.77 "	12.53 "
" 5.....	— "	9.26 "
Average.....	8.17 "	9.84 "
Average in dried drug.....		10.71 "

The proportion of *morphia* was determined by Staples' process with Proctor's modification,³ the dry powdered opium being first exhausted with warm benzene, and the solution treated with ammonia in presence of alcohol, exactly as in the U. S. P. preparation, the crystals being tested with washed ether (without use of animal charcoal). The opium was weighed in the condition purchased, and the per cent. of morphia calculated on that weight. The per cent. of *water* was ascertained by drying the powder, in a steam oven, to a constant weight. The samples were more or less air-dried when obtained. No. 1 was assayed again by Fluckiger and Hanbury's process,⁴ which gave 10.32 p. c. of morphia not as pure as that by Staples' process. No. 5 was tried also by the process of Hager and Jacobsen,⁵ which gave 9.89 p. c.

(2) *Contributions from the School of Pharmacy of the University of Michigan*, III.; in *Am. Jour. Phar.*, 1875, p. 460.

(3) *Proc. Am. Phar. Assoc.*, 1870; *Am. Jour. Phar.*, 1871, 65.

(4) *Pharmacographia*, p. 59.

(5) *Hager's Untersuchungen*, ii., 176: *Hoffmann's Examination of Medicinal Chemicals*.

This process may be described as follows: Triturate 6½ grams of opium with 3 grams of dry calcium hydrate and enough water to form a soft mass, and rinse into a weighed flask, adding water enough to make the mixture weigh 74½ grams. Cork, digest on the water-bath for one hour, cool and replace water to restore the weight to 74½ grams. Filter 50 cub. cent. into a large test-tube previously marked to that measure; add to this filtrate 8 drops of benzole and 3 cub. cent. of ether; cork and shake, and then add ¼ grams of powdered ammonium chloride, and agitate till dissolved. After three or four hours, filter out all the crystals upon a weighed filter; dry and wash with a little chloroform (Hager prefers non-alcoholic ether); then dry and weigh as alkaloid from 5 grams opium.

By the U. S. P. process, Mr. Moss obtained smaller percentages, as the loss by animal charcoal could not be wholly prevented. Schacht's process (1862) requires the decolorization of the opium infusion with animal charcoal, after which the filtrate is set aside with excess of ammonia, and the crystals well washed with ether for extraction and determination of narcotina. Dragendorff, in his recent valuable work,⁶ states the loss by this use of animal charcoal to be about 1 per cent. He recommends its omission, substituting purification by washing the crude morphia with dilute alcohol, or else dissolving in acidulated water and precipitating by ammonia. (This precipitate will be crystalline, and requires time). Of the processes above named, Mr. Moss prefers Hager-Jacobsen's, both because of its good results and because it is completed in a shorter time than the others.

For several years, in the analytical practice of students in the University School of Pharmacy, three to six lots of opium, obtained from the trade indiscriminately, have been each year subjected to morphiometric assays. These with a few exceptions have yielded from eight to ten and a half per cent. of morphia in the dried opium. Two or three nearly worthless samples have been found, containing only one to three per cent. of morphia.

Not many reports of the value of opium current in America have been made. In 1867, Alfred Southal reported to the British Pharmaceutical Conference that "good commercial opium, such as is commonly found in the English market," was found to contain "frequently as much as ten to thirteen per cent. of morphia."

Considering the rarity of opium valuations by the smaller dealers, it is surprising that the quality of this expensive drug should average so near to the standard as it does. The greater proportion of the low grade opium and of the high grade opium goes, as it ought, to the morphia manufacturers. And here one

(6) "Wertbestimmung einiger starkwirkender Drogen," 82.

is reminded that our pharmacopœia only stipulates that opium shall not be below its standard of morphia strength. An article containing 18 per cent. morphia is not rejected by the code. The requirement seems to presume that the consumers of opium are desirous of ingesting as much morphia as their money will purchase. Or, perhaps, it was held that the morphia manufacturers could be relied upon to glean out all opium above standard.

It is well known that opium of excellent quality has been raised in this country, but the "American opium" that has been offered to a limited extent in the trade of late is an obvious fraud. Mr. Moss (*op. cit.*) examined two samples of this material. "The first sample of "American Opium" was obtained at a dispensing pharmacy in Toledo, Ohio, with the assurance that it came from Southern Ohio, was two years old, was believed to be veritable opium, but was never dispensed in prescriptions. It is darker in color than genuine opium, with nearly the same consistence, and permeated with small crystals, just distinctly visible to the naked eye. It has an odor resembling both tobacco and licorice, but not resembling opium. It has no taste of opium. It was found to be destitute of both morphia and of narcotina."

"The second sample was obtained at a pharmacy in Detroit, Mich., after fruitless inquiry for American opium at a large number of stores in that city. It was marked "Wilson's American Opium," and was stated to have cost \$4 per lb., and that it was not used except for laudanum for external application! It closely resembled the other sample, having neither the appearance, taste or odor of opium, and not containing morphia or narcotina, at least in quantities distinguishable by ordinary means."

Numerous determinations of the morphia value of the *Tincture of Opium* in use have been reported, and, it must be confessed, the tincture of the shops varies in value much more than does the opium of the shops. As the pharmacopœia directs that the tincture shall be made of *dried* opium powder, and as

the faithful execution of the process can leave no appreciable quantity of alkaloid in the residue, *one fluid ounce should contain 3.75 grains of morphia* (the content of 37.5 grs. dry opium).

Reports of valuation of ten samples of laudanum, picked up at the shops, was made by Geo. W. Kennedy, of Pottsville, Pa.⁷

The method of purifying the alkaloid must have caused a very slight loss. The number of grains of morphia found, for each fluid ounce of tincture, was, respectively—3.20—3.25—2.90—1.60—2.80—2.65—1.50—1.65—3.30—2.65.

The valuation of eighteen samples, obtained in New York city, Brooklyn, Chicago, and Hartford, Conn., was reported by L. M. Price, in 1871.⁸

The quantities of morphia found, in grains for each fluid ounce of the tincture, were as follows: 3.61—3.82—4.33—4.46—3.29—3.41—4.24—2.84—3.31—3.48—2.39—2.68—2.60—3.39—3.02—4.34—4.70—3.87.

The tincture of opium in use in Great Britain is reported to vary to fully as great an extent as our own.⁹

There is little doubt but the most common occasion of depreciation of the value of laudanum is neglect of the requirement to weigh *dried* opium for its manufacture.

- It is one among many evidences that physicians are unfortunately oblivious of the United States Pharmacopœia, that the Deodorized Tincture of Opium (the authorized representative of "McMunn's Elixir") does not come more generally in use, under its own name as a preparation of known and established composition. There is need of a gelenical form of opium, made free from narcotina and odorous matters, but, perhaps the difficulty lies in the circumstances that the Pharmacopœia (not the last revision) lies on the top shelf covered with dust, while the advertisements of numerous elixirs, etc., are on the physician's table, and their samples presented to his hands. One

(7) *Am. Jour. Phar.*, 1874, 55.

(8) *Proc. Am. Phar. Assn.*, XIX., 447.

(9) SOUTHALL: *London Chemist and Druggist*, 1876, Sept. 14.

thing more, however, the Pharmacopœia ought to do, whether it is heeded or not, and that is to order at least one of the opium tinctures (the deodorized) to be made of standard morphia strength, by assay.

Correspondence.

IMMORTALITY OF THE SOUL PSYCHOLOGICALLY CONSIDERED.

Our studies powerfully determine our modes of thought. Hence the need, in order to true thinking, that the students of mind and matter look upon the researches of each other. In this way the evils of one-sided thought will be, if not removed, greatly reduced. It is our hope that a consideration or two from the mental standpoint on the subject of the soul's immortality may be useful for the reason suggested.

Science aims to give a *rational* interpretation of the facts and phenomena of the world we inhabit. Some of the keenest differences of scientific opinion arise from certain phenomena being regarded by some as ultimate and independent existences, and by others as resultants of the combination of two or more ultimates. Among differences of this kind the most important is the one which hinges upon the answer given to the question : "Is mind merely a function of the body, or is it an independent entity, being simply conditioned by the body?"

The observers of the world may be generally classified as materialists and spiritualists. We use the term "spiritualist" ~~in~~ the sense Sir William Carpenter, does, namely, to denote those who regard mind as an existence distinct from matter and not ~~in~~ any sense a function of it.

There is a consideration lying at the root of this difference ~~of~~ interpretation of the facts and phenomena of the world ~~which~~ is fundamental. We hold it to be a postulate of reason. It ~~is~~ this. Is there a *teleological* factor to be admitted into our study

of our earthly environments? The rejection or admission of this factor constitutes a man a materialist or a theist.

Once admit a final cause in things and there follows inevitably the admission that mind has an existence independent of the body. The theistic position involves the admission of the fact that man, in all that is characteristic of him, is a spirit. Deny the teleological postulate and you land in cognitive nihilism. In the broadest sense of the word we are left *mindless*.

Grant that mind is a *fact* in our existence, that is, an entity independent of matter although resident in it and conditioned by it. We, to know mind, will examine it as we would any other object or fact. We shall know its properties in the *degree* in which we have a *good specimen* upon which to make our observations. We do not ascertain the properties of salt from salt that has lost its savor. A morbid, dead soul is not the one to enlighten us respecting *soul* properties.

The immortality of the soul is a question not of spiritual Pathology but of spiritual Physiology. In other words, it is a question connected with normal and not morbid states of mind or soul. The conviction that the soul is immortal is one of the modes of consciousness characterizing a spiritual mind. This mode of consciousness is present in sensuous as well as spiritual minds *potentially*; but it is only in the latter that it is actualized to that degree that it appears as a phase or property of mind. The instinct of prayer is, we hold, inherent in the mind. Certain conditions are required for its manifestation. It appears wherever there is intensely present a sense of creatureship. In one form or another men will then pray. In like manner the instinct of immortality manifests its presence in the soul whose spiritual sense or faculty is so developed that the soul enjoying such development may be classed as spiritual and not sensuous.

At this point the demand comes: "Define to us a spiritual mind." *Psychologically* this is, in part, what we are endeavoring to do. That any *a priori* definition can be given we hold to be impossible. There is, however, nothing unwonted in this po-

sition. No one can give a verbal definition of redness. We can only know the color by *seeing* it; in other words, by experience alone can we know what is meant by the term red. Similarly we know the spiritual mind by becoming spiritual. It is a type of mind which one has to attain to in order to understand. In all research, physical and mental, there are certain things that have to be accepted as facts, for which no reason can be given than that they are what they are. We accept them as we find them. Why one article is *per se* a food and another a poison we cannot tell. By their results, their phenomena only, do we know them to be foods and poisons. By mental phenomena only do we know mind. An ineradicable conviction of its own immortality marks certain types and conditions of mind. Does a true psychology warrant us in inferring that these types and conditions of mind are normal? We answer that, to us, it does, and that therefore the conviction of our immortality is a true mental phenomenon. This is what was meant by the statement that the immortality of the soul is a question of spiritual Physiology.

We are aware that this mode of viewing the subject will not satisfy some minds. They would like to *prove* certain things we have treated as the bases of argument. But it is well known that herein lies the differences of opinion and reasoning on almost all subjects. Facts are the foundation of reasoning. You cannot prove them. You simply find that they are what they are, and you thus accept them as starting points for processes of ratiocination and research. We cannot *prove* why arsenic is a poison and flour a food. Some men demand proof for the existence of a personal God. We accept it as self-evident, as something that from the make and structure of our minds and from the very nature of things we are called upon to believe. This truth was accepted as a fact by Kant. It is also treated as a "First Principle" by the scientific and accomplished authors of the "Unseen Universe." And yet many minds exert themselves to *prove* the existence of God. Now an ultimate truth

cannot be proven. We take as an ultimate in our inductive researches anything for which no reason can be given that it is so, but that it is so. No other thing is better known than itself and hence it is unprovable. That there is a type of mind that is sensuous we know as a fact; that there is another that is spiritual we also know as a fact. We moreover receive as a fact that the latter type is the normal one. By observing the spiritual mind we ascertain what are the attributes of mind. It is thus that we discover that immortality is an attribute of mind.

G. M. M.

Selections and Translations.

VESSEL-DILATING NERVES. By PROF. GOLTZ, in *Schmidt's Jahrbücher.* Translated by CONRAD GEORG, M. D., *Ann Arbor.*

Division of the sciatic is followed by a rise in temperature of several degrees, which disappears entirely in a few weeks, and the affected limb becomes colder than the healthy one. Now, however well the theory of paralysis of the vaso-motor nervous system may serve to explain the rise of temperature, it is not applicable to the second observation, the diminution of temperature. The time of the appearance of the latter is far too short for admitting healing of the divided nerve stumps. Division of the spinal cord, between the dorsal and the lumbar region in a dog whose paralysed posterior extremity was cool, was followed by increased coldness of the affected limb. In another dog where the sciatic nerve had been previously divided, the temperature of the limb sank after division of the spinal cord, whilst that of the unaffected one rose, and afterwards gradually diminished; now, when the cord was again divided in the lumbar region it induced rise of temperature in the healthy limb. In a dog where one sciatic had been divided weeks before, and the spinal cord a short time previously, division of the remaining sciatic induced rise of temperature in the corres-

ponding paw, a fact absolutely contradicting the old theory of tonicity of the nerves of the vessels. The paw of the leg in which the nerve had last been divided was always warmer than the other one. Division of the sciatic in an animal in which the spinal cord has been divided, is followed by such a dilatation of the vessels as to remove the disturbance caused by ligation of the femoral artery.

Prof. Goltz concludes from the above experiment that simple division of a nerve excites those of its fibres acting as dilators. The dilatation caused by division is an active, self-exhausting process, terminating in permanent contraction. Besides those of the medulla and spinal cord, there are small nerve centres within the vessels maintaining their tonicity. This new hypothesis, antagonistic to many parts of the prevailing physiology of the nervous system, is further supported by the following facts : A second division of the peripheral nerve stumps is also followed by dilatation of the vessels, and rise of temperature. Irritation of the nerve with the induced currents, after division of the lumbar chord, produces likewise a rise of temperature in the corresponding extremity. In this instance we have dilatation instead of contraction of the vessels, as has heretofore been supposed. The rise of temperature is distinctly manifested after irritation, occurring immediately after division, as well as when applied after the dilatation has ceased ; being, of course, less prominent in the former instance. Similar results were obtained by chemical irritation with solutions of chloride of sodium. A similar effect was likewise obtained by irritating the lumbar cord with the induced and galvanic currents. Irritation of the central fibres of the divided sciatic causes dilatation of the vessels of the opposite side by means of reflex action ; the lumbar cord is a centre for this reflex action. The sciatic nerve, therefore, contains especial "vessel-dilatating" fibres which arise chiefly in the lumbar cord. Goltz thus explains the phenomena described above : The rise of temperature following division of the spinal cord is caused by an irritation of the "vessel-dilat-

ing" fibres. The lumbar cord remains also, according to Goltz's theory, a centre for reflex dilatation of vessels; whether also for reflex contraction of vessels, remains an open question. Claude-Bernard's experiment of division of the cervical sympathetic, can be explained by aid of this theory, although on account of the complexity of the conditions complicating this experiment subsequent irritation is not followed by dilatation of vessels. The following observations are readily explained by aid of this theory, viz: Dilatation of the abdominal vessels after division of the splanchnic nerve; hyperæmia of the eyeball following division of the trigeminus; perspiration after division of the cervicle sympathetic; augmented secretion of the submaxillary gland caused by division of the chorda tympani. Finally in support of this theory Goltz points to the fact that an irritation is always observed in the sensory nerves after division, for example, pain in the fingers for a long time after division of the median nerve.

The prevailing theory of momentary irritation after division of a motor nerve is chiefly based on the single contraction of the muscle, which, as an inactive mass, cannot be induced a second time to contract by the slight irritation still present—although Schoff had long ago observed continuous trembling of the corresponding half of the tongue after division of the hypoglossal nerve. Should Goltz's theory of the continuous irritative condition of a divided nerve be correct, then the inactive nerve current of DuBois would be a current weakened by negative fluctuations.

On the strength of these facts Goltz induced Drs. Putsey and Prince Tarschanoff to investigate the relation of the condition of the vessels to the temperature of the paralysed extremity. When they divided one sciatic of a dog and then amputated the toes of both posterior extremities, the blood flowed more freely from the paralyzed limb. When the peripheral end was now irritated either with the induced current or chloride of sodium, then the opposite condition ensued. They obtained similar

results on dogs and frogs poisoned with curare. Direct observation showed dilation of the vessels in ducks and frogs immediately after the operation and contraction on irritation of the nerves, which however was followed by dilatation when the irritation was continuous. Division of a nerve caused a marked rise in the temperature of the extremity; but irritation of the peripheral end of the nerve induced diminution of temperature. After three weeks the difference in temperature had subsided. After dividing one sciatic of a frog and amputating the toes of both extremities the blood flowed more freely from the paralyzed foot. After ten days the flow on fresh cuts was equal on both sides. When the spinal cord was now crushed near the centre of the back the flow ceased almost entirely in the paralyzed foot. On repetition of the experiment there was seen a fresh afflux of blood to the parts still in nervous connection with internal organs. The authors explained this phenomenon without the aid of the "vessel-dilating" nerves, by the restoration of the tonicity of the vessels by a local peripheral mechanism, the activity of which is increased by division of the nerve ramifying through it, just as the excitability of spinal cord is augmented by division of the cord.

DIAPEDESIS OF LEUCOCYTES IN MAN.—ITS ANATOMO-PATHOLOGICAL DEMONSTRATION. By LEON COLIN, Prof. at Val-de-Grace. Translated by W. J. HERDMAN, M. D., Demonstrator of Anatomy, University of Michigan.

Continued from March Number.

Let us now see the part that malarial poisoning has to play in furnishing proof of the diapedesis of leucocytes in man.

On the 30th of December, 1872, I presented an article to the Academy of Sciences setting forth my opinion upon this subject, and I have since expressed the same opinion before the Medical Society of the Hospitals and the Society of Biology. There exist, I declared, two remarkable lesions in malarial poisoning and *melanemie** which is the result of it: 1st. A greater

* A state of the blood in which the blood in the arteries and capillaries presents the character of venous blood.

or less accumulation of pigment in the splenic pulp. 2d. Pigmentary deposits in different tissues, especially in those which are in closest contact with the blood circulating within the walls of the vessels. The deposits are found in greater frequency and abundance in the meshes of the minute capillaries in which the dark colored granules are subjected to prolonged stasis by reason of the obstruction to the circulation which they themselves occasion.

The pigment thus deposited in the vascular and perivascular tissues is quite as dark as that which is found in the blood and in the spleen ; even among those which a pernicious attack has removed from the beginning of the poisoning, the pigmentation of the hepatic and cerebral capillaries is as deep as the pigmentation of the blood. I now no longer believe that the dark colored deposits made around and within the meshes of the vessels in malarial poisoning are the result of the transformation, in place, of the coloring matter of the red blood corpuscles. If these deposits were the product of such a transformation there would be found, especially among the individuals named, from the commencement of the poisoning intermediate degrees of coloration between the red tint of extravasated blood and the melanotic tint; but these degrees are not found to exist.

The migration of pigmentary granules contained in the blood current seems then to be the origin of the pigmentation of the walls of the vessels. But does this migration take place by simple penetration of the granules without a vehicle of any sort ?

There exists, in our opinion, active intermediate agents to assist in this migration ; these are the leucocytes which seize upon and envelope, so to speak, the foreign bodies with which they come in contact, and by virtue of their amoeboid movements are able to traverse the walls of the minute capillaries and diffuse themselves through the tissues. This double character of leucocytes has even been utilized to inject coloring substances into the blood of animals, and to prove more clearly in local inflammations the migration of these globules through the vascular walls

where they carry with them the colored corpuscles which they have enclosed and which reveal their passage. That which causes me to admit the agency of leucocytes in this extravasation of melanotic pigment is that in the blood itself the pigmentary granules are the more habitually enclosed either in leucocytes that are clearly recognized as such or in a hyaline substance which constitutes a transparent zone about them and appears to us to indicate that here also the envelope is a white corpuscle modified more or less in form.

It was this arrangement that I indicated in a recent communication made to the Medical Society of the hospitals, in reference to a fatal illness that occurred in my practice, and of which I made the autopsy in company with M. Kelsch. Leucocytes, therefore, containing pigment traverse the walls of the vessels, and since they themselves after their passage disappear in the meshes of the tissues in order to engage in the various nutritive processes, they deposit in the substance of the tissues and exterior to the vessels the pigmentary material with which they become impregnated while in the blood.

Since I made my first communication to the Academy of Sciences upon malarial poisoning, the doctrine of the migration of leucocytes charged with melanotic pigment has received the additional confirmation of several different observers:—1st. The Treatise on Pathological Histology, edited by M. M. Cornil and Ranvier concerning the lesions found as the result of pernicious fevers, contains the following:

“In the cases that we have observed the pigmentary particles which exist in the blood are round or angular, of an intense blackness, varying in diameter from extreme minuteness to the 8 or 9 thousandth of a millimetre; they are all contained in white globules or enveloped by a colorless, granular zone, which very probably represents the protoplaem of a white corpuscle forming a thin film around the pigmentary granule.

“When the patient succumbs and the autopsy is made most of the organs, but especially the spleen and the liver are

found of a slatey gray color. Upon making incisions in the organs after hardening with alcohol pigmentary granules are found in the white corpuscles contained in the vessels, in the vascular cells and in the cells of the parenchyma. The visceral lymphatic ganglia are likewise pigmented.

"The pathological pigment departs itself here in the same manner as any inert granular matter contained in the blood—Vermillion for example.

Where finely powdered vermillion suspended in water is injected into the blood of an animal the granules are taken up by the white corpuscles and carried by them into the various organs; they traverse the vascular walls and so dispose themselves finally in those structures which are the seat of the pathological pigmentation. It is correct to suppose that melanemic proves conclusively the pigmentary transportation of the blood in the spleen, and the transformation of the pigment in the blood by the white corpuscles.

(To be Continued.)

SALICYLIC ACID AS AN ANTIPYRETIC.

Dr. Hiller in *Deutsches Archiv fur Klinische Medizin*, after comparing the respective advantages and disadvantages of quinine and salicylic as antipyretics, concludes as follows:—Salicylic acid is certainly an antipyretic, but, with reference to its exhibition and working, by no means competing with quinine, and no one can doubt that its lot with the last named will not be equal.

After all, who, in spite of himself, is not forced to recall to memory the old quarrel between *Cortex Salicis* and *Cortex Chinæ*?—*Audi Alteram Partem.*

SALICYLIC ACID FOR FOUL BREATH AND OFFENSIVE EXPECTORATION.

Prof. DaCosta recommends Salicylic acid as an agreeable and harmless remedy against foul breath, and claims also that it acts

as a detergent on the character of offensive secretions. In a case of gangrene of the lungs the administration of this agent was followed by a marked improvement in all the disagreeable symptoms.

If the internal administration should fail to accomplish the desired result the remedy may be used in the atomizer in a solution of ten grains to the ounce of water, with enough glycerine to render it soluble. Dr. DaCosta has employed it a number of times with marked success in cases of indigestion with bad breath.

By itself Salicylic acid is practically insoluble in water, but the addition of a small quantity of borax will enable ten grams to be taken np by an ounce of water. In this form it has been used in the Pennsylvania Hospital as a mouth wash, and gargle, with much satisfaction :

R.

Sodii borat.

Acid, Salicylic aa. grs. x.

Glycerine, ʒi.

Aquæ qs. ad. ʒj.

Nx.

—*Med. and Surg. Reporter.*

HIGH TEMPERATURE.—Mr. J. W. Teale read at a meeting of the Clinical Society of London, Eng., notes of a case in which the temperature as shown by the thermometer was unusually high. The patient, a young lady was thrown in the hunting field, on Sept. 5th, 1874, by her horse taking a standing jump at a five barred gate, and catching his feet in the topmost bar, pulling heavily upon the rider. The lady staggered to her feet after momentary unconsciousness, and was seen in five or six hours after by Dr. Teale. She was in a state of collapse and complained of pain in the back. The left fifth and sixth ribs were fractured, but united kindly. There was some considerable pain and tenderness in the back, and the temperature remained from

normal to 101° Fah. for some time. On Nov. 3d it was 105° Fah. ; on the 4th 106° Fah. ; Nov. 8th 110° Fah. ; Nov. 11th 116° ; Nov. 12th it fell to 110° Fah. ; Nov. 13th, 122° Fah. ; the utmost limit of the thermometer used. The range of temperature varied very greatly, and no less than seven different thermometers were used to guard against error, but they all registered the same. As the Clinical thermometers registered only 118° , Mr. Teale had one of 122° made for this case, but it was not sufficient. He thinks the temperature probably rose to 125° . The patient recovered.—(*Lancet.*)

SALIVATION DURING GESTATION.—W. H. Gatewood, Jamaica, Va., reports a case of salivation during gestation, to the amount of three to four quarts of spittle per day during the entire time. The flow of saliva decreased after delivery but it had not entirely ceased. This woman, a primipora, was troubled with severe after-pains and "Phlegmasia Dolens of both upper extremities." The phlegmacea was treated with hot hop fomentations with very satisfactory results.—*Va. Med. Monthly.*

HYPODERMIC INJECTION OF MORPHIA.—Dr. W. A. Greene of Ameneus, Ga., states that he knows a man who had used hypodermic injections of morphine, on an average of six times a day for the last four and a half years, with at least two grains at each dose. This man has used to Sept. 1st, 1875, fully 1,500 injections and 3500 of the salt. These injections were made by himself and others not familiar with the process, and little or no attempt made to avoid the injection of air. "I am sure the young man, from first to last, has had pounds of atmospheric air in his [injections], and without the least unpleasant effects." "He has not had during all this time exceeded half a dozen abscesses from the use of the syringe."—*Richmond and Louisville Med. Journal*, Jan. 1876.

INTUSSUSCEPTION OF THE BOWELS.—Dr. Ross, of Toronto, Ont., reports two cases of intussusception treated successfully by injecting into the rectum metallic mercury—other means having been ineffectual. The children, each about eighteen months of age, were placed heads downward, and 3*ij* of mercury injected into the rectum. They were shaken up and down in this position for about ten minutes. Then turned to the right side, and finally on their faces. The shaking being continued all the time. The first patient was relieved in about twenty minutes, and the second in thirty. By reversing the positions the mercury flowed from the rectum. Both patients did well.—*Canadian Jour. Med. Sciences.*

SUBCUTANEOUS INJECTIONS OF WATER.—Dr. Letut in a communication to “L. Union Medicale” states that he injected water, supposing it to be a solution of morphia for the purpose of relieving the pain of sciatica. The result was so gratifying that he continued to use it with the most happy results. (1)—*British Medical Journal.*

CREASOTE FOR TAPEWORM.—Mr. Buckwell has given one to three drops of creosote made into a pill with Pulv. tragacanthæ Co., half an hour after each meal, so as to impregnate the ingesta, for seven days, and then castor oil as a cathartic, with very favorable results in relieving patients of tapeworm.—*Med. Times and Gaz.*

SALICIN AND ERGOT IN ACUTE DYSENTERY.—Dr. L. M. Lovelace at a meeting of the Southwestern Kentucky Medical Association, recommended for acute dysentery. The use of selenicir grs. *ij*. ad. grs. *v.*, and Fl. E. *xt.* Ergota gtt. *xx.* ad. grs. ~~xx~~^{xx}—every three hours till the patient is relieved.—*Richmond & Louisville Med. Jour.*

DIPHTHERIA (TREATMENT.) Lecture by J. SOLIS COHEN, M. D.

If diphtheria is primarily or essentially a constitutional affection, its development, when once it has fairly attacked the organism, can no more be prevented than can the development of the contagious exanthemata, typhoid fever, and other specific diseases of like character. Seclusion from infection appears to be the only reliable means of prophylaxis. If removal from infected centres is impracticable, we must be content with advising avoidance of exposure to cold, inhalation of dust and other deleterious matters in the atmosphere, over-exercise of the voice, and everything whatever which may predispose to inflammation or catarrh of the nares, throat and air passages. At the same time care must be taken to keep the general system in its healthiest condition; and if there is occasion for the use of tonics, the tincture of the chloride of iron may be administered with great propriety.

Upon the appearance of any morbid secretion in the throat or nostrils, frequent and efficient cleansing should be instituted with washes, douches or gargles of weak solutions of table salt or chlorate of potassium; and if there is direct exposure to infection, carbolic acid, salicylic acid, sulphurous acid, permanganate of potassium, the hyposulphites, and the like, may be judiciously substituted on account of their antagonistic action upon the development or propagation of low organisms.

The treatment to be instituted, once the pathological products have become manifest, will depend upon the views held as to the nature of the disease and its cause. Nutritive, supporting and stimulating treatment constitutionally, is now almost universally recognized as absolutely necessary; and depleting measures even of the mildest character are almost universally avoided. This unanimity would indicate that diphtheria is something more than pseudo membranous croup, which, if we credit the records in our text-books, was formerly thought to require the use of antiphlogistic measures.

With regard to the treatment of the local manifestations, there

is much less unanimity of opinion. Practitioners who regard diphtheria as chiefly a systemic disease, are apt to consider local measures as useless and productive of fresh sources of injury. They will depend on systemic medication to the exclusion of specific or special local measures, unless we look upon the exhibition of emetics, expectorants, and the like, for the expulsion of accumulations in the air-passages, as local measures. Many eminent practitioners discard all local treatment whatever. Practitioners who believe the disease to be chiefly local in the first instance, will direct their efforts towards removal or destruction of the morbid products, and, if too late to accomplish this result, to the exhibition of local agents that dissolve or decompose them. Those who partake of both views will pursue a mixed treatment accordingly.

Although numbers of observers denounce topical treatment on the score of its uselessness in a systemic disease, its inefficiency to prevent subsequent deposits in the same locality, its liability to induce additional deposits upon surfaces which may be accidentally or unintentionally exposed to contact with the local remedy, the difficulty of its effectual application in certain instances, and the like, evidences of the efficacy of local interference have been too numerous to justify entire reprobation of the practice. Employed by Aretæus, centuries ago, and then reintroduced into practice by Van Swieten, and again by Bretonneau, it has been abandoned and resumed again and again. Some observers resort to the local action of caustic applications, with a view of arresting the extention of the membrane over unaffected structures, or effecting its entire destruction,—and chiefly on the theory that the main danger lies in the deposit; others hope to excite a substitutive healthy inflammation of the part which shall supersede the unhealthy specific process; others, again, hope to destroy the cryptogamia which are believed to be the initial cause of the deposit; and others hope to place the mucous membrane in a condition unfavorable for the propagation of these organisms.

As diphtheria is always serious, every case demands close attention, and frequent and careful examination, with the aid of all the resources at our disposal ; and the treatment, to be at all effectual in hazardous cases, must be assiduous and free from vacillation. Topical applications, when resorted to, should be made by the medical attendant himself, or by a professional assistant fully competent, no matter how frequently they need to be repeated ; and other local measures should be instituted under the personal superintendence of a well-instructed attendant. Many a patient is sacrificed to inefficient attention, a neglect that is only excusable in the country practitioner whose patients reside at distances so remote that it is impossible to secure them a proper amount of professional surveillance, and which is actually culpable when there are other physicians whose assistance can be enlisted if the regular adviser is unable by press of business to devote sufficient personal attention to his own patients.

Several objects must be kept prominently in view during the entire treatment. Chief among these is efficient sustenance of the patient, and the prompt discharge of the morbid products as they accumulate. If these two main indications can be fulfilled the patient can be carried safely through the disease. There is no specific, topical or constitutional, which can arrest the disease or prevent the evolution of the local manifestations, although there are agents which modify the process and diminish the virulence of the infection. A warm, equable temperature, an excess of humidity of the atmosphere, and free ventilation conduce to the comfort of the patient, and the facilitation of expectoration. Until the appearance of the exudation we may depend upon nutritive and tonic treatment, with thorough cleansing of mouth, throat and nares ; care being taken to disinfect the apartment and the house as far as practicable. This disinfection may be accomplished to some extent by the free use of solutions of carbolic acid exposed here and there, or sprayed about from time to time, and of sulphurous acid in sprays, or in fumes from ig-

nited sulphur ; these agents being competent, in some instances, to destroy the germs which spread the infection, if they do not originate it.

Tincture of the chloride of iron is one of the most valued remedies for internal administration. It is usually given in decided doses frequently repeated ; and from five to fifteen drops, according to the age and vigor of the patient, every second hour, hour or half-hour. It is necessary to secure its action upon the blood and system as rapidly as possible. Its frequent deglutition likewise exerts a beneficial physical influence upon the morbid products with which it comes in contact ; for, as will presently be stated, it is one of our most reliable agents for topical medication. I have no hesitation in commending the use of this remedy.

Quinia is much used as a tonic in diphtheria, as well as for its action upon the nervous system, and as an apyretic in fever. It may be combined with the tincture of iron in the form of the hydrochlorate, or, if that is not accessible, in the usual form of sulphate. It is given in decided doses until the buzzing in the ears or some other manifestation gives token that the system is under its influence, when the doses may be lessened and the intervals between them increased. I am not much in the habit of prescribing quinia in diphtheria, unless I see some special indication for its exhibition ; but this practice is by no means to be construed into any absolute disparagement of its remedial agency.

Alcohol, in the form of some strong wine or brandy, is of great value as a stimulant. From half a drachm to half an ounce of brandy, or its substitute, according to the age of the patient, may be given every two or three hours, or more frequently ; and its free administration should not be delayed after the earlier symptoms of loss of vigor are apparent. Its effect on the general condition of the patient will be the criterion for its continuance. When indicated and well borne it may be used freely, especially if efficient nourishment is difficult.

Carbonate of ammonium is a remedy of great value at special

moments of sinking. A full dose at such periods will sometimes stimulate the patient during a short interval, which may be taken advantage of for the administration of the remedies in systematic use of emetics, or inhalations of lime, and the like, to facilitate the expulsion of accumulating secretions in the air-passages.—*Medical Record.*

ON THE CAUSES AND TREATMENT OF ABORTION. By
DR. JOHN C. PETERS, *New York City.*

In former times, apart from accidental causes, such as falls, blows, strains, heavy lifts, excessive exertion, etc., either plethora or anaemia, or congestion, or irritability of the uterus, were regarded as the most common causes of abortion.

In latter times, local affections of the os and cervix, or more decided diseases of the placenta and membranes, have had most stress placed upon them.

Women of plethoric habit, with habitual copious menstruation, were said to be greatly inclined to abortion; also very nervous and irritable women; and those who were sedentary, fat and indolent. Excessive irritability of the uterus was decreed to be a common cause of miscarriage, but after the fourth or fifth pregnancy, this irritability was supposed to be exhausted and the woman to go on to the full term. This, with those uterine congestions which so often occur in plethoric women, and even in those non-plethoric females with chronic endometritis, were the only and predisposing causes which Cazeaux was willing to admit.

Hodge placed great stress upon an irritable condition of the uterus. He says: Pregnancy is then not apt to occur, and when it does, the irritability of the womb very generally causes much suffering during the whole period. Sometimes contractile pains and abortion occur; or the slightest motion of the foetus becomes truly annoying; while parturition is more severe and the after-pains more common and more intense.

Byford thinks that abortion is a very frequent effect of inflam-

mation and ulceration of the os and cervix uteri, especially when the disease is inside the cervical cavity. Conception may then occur and impregnation be complete; but after gestation has continued for a certain time abortion is apt to take place. Some of these patients abort very frequently and never have a full-term child. Others have one or more children and then miscarry ever afterward; while another class miscarry frequently, but occasionally go their full time. In some of these cases the cervical disease induces, by continuity of tissue, a congestion and arterial injection of the uterus sufficient to cause hemorrhage, producing separation of the membranes, or placenta, followed by external hemorrhage for a few hours, or several days succeeded by uterine contractions, and complete abortion. Or the increased sensitiveness of the mucous membrane may primarily increase its excito-reflex influence so as to first arouse uterine contractions, followed by hemorrhage and expulsion of the foetus and membranes.

Thus, when the abortion is caused by congestion it is apt to be ushered in by hemorrhage followed after a variable length of time by uterine contractions; but when the expulsion is the result of increased irritability, the first symptoms are paroxysmal pains and contractions, followed, after a while, by hemorrhage and expulsion.

The congestive variety takes place most frequently at the time when the monthly congestion is added thereto; while the irritable or spasmodic variety is independent of such influence, and may occur at any time.

In the congestive form, the foetus perishes before the expulsive efforts arise; while in the other, the foetus remains alive until the contractions have persisted long enough to partially separate the membranes and placental attachments. Although these simple views may be true to a certain extent, yet the study of Abortion is much more difficult and complex.

Under the exciting influence of the fecundated ovum, the uterine mucous membrane and epithelium become the seat of

wonderful changes. The mucous tissue becomes swollen and congested, soft and spongy, and, in fact, hypertrophied, especially in the epithelial layer. Not only is the epithelium increased, but the uterine glands become much enlarged; the simple ones become compound, and the whole mucous membrane shows evidence of considerable hypertrophy; and in fact is converted into the uterine decidua. The external or parietal layer of this so-called *decidua vera*, or *decidua uteri*, or *parietal decidua* presents a very shaggy appearance, from small projecting filaments, caused by the natural separation or normal tearing away of the membrane from the proper tissue of the uterus. If this normal separation takes place too rapidly or extensively, an early abortion will occur. This has been called *effluxio*, when the expulsion happens before the seventh day; and *ovular abortion*, from the seventh to the twentieth day; but both may be scarcely more severe than a very profuse and painful menstruation. These accidents are, of course, facilitated by local diseases of the os, cervix, or body of the uterus, and also, of course, by systemic diseases of the mother, such as rheumatism and syphilis; and even by congestion or excessive irritability of the womb from many other causes.

Abortion is called *embryonic* when it occurs between the first and third months; and diseases of the chorion are thought to be the most common causes of it. At the end of the first month, the whole surface of the chorion is villous, and the foetus is only $\frac{1}{2}$ inch long. At the end of the second month, the chorion is distinct from the amnion, the formation of the placenta has commenced, and the foetus is $1\frac{1}{2}$ inches long. At the end of the third month, the cord is visible, the two deciduae are in contact, a small placenta is fully formed and separate, and the foetus is $2\frac{1}{2}$ inches long. When abortion occurs before the formation of the placenta, it is said to arise generally from a fatty degeneration of the chorion-villi, both in the cells, and walls of its blood-vessels.

When abortion supervenes from the third to the sixth month,

it is called *fetal*, and diseases of the placenta rather than of the chorion are decreed to be its most common causes. The formation of the placenta has been well studied, and we need only allude to the principal points in its development. It commences in the allantois, which is a pouch or protuberance from the inferior part of the intestinal canal of the foetus. When the allantois appears, the amniotic cavity is already so much developed that it surrounds the entire foetus, and encloses the pedicle of the umbilical vesicle in such a way as finally to form the umbilical cord by which the foetus is suspended in the waters of the amnion. The allantois-pouch then insinuates itself along the cord, and progresses upwards until it finally comes in contact with the deep-seated surface of the second chorion, over which it extends and finally penetrates, so that the villi of the allantois permeate and inosculate with those of the chorion. The villi of the allantois are vascular, and their essential office consists in the formation of the placenta at one point where they become greatly enlarged. At this point the villi of the chorion and allantois become much developed and hypertrophied; they spread out and ramify in every direction, and become so joined together and interlaced as to form the more or less circular and apparently compact disc, which is then called the placenta.

A variety of placental diseases may be followed by abortion. Meadows says, "diseases of the placenta are probably the most fertile causes of abortion acting through the foetus; and undoubtedly syphilitic and fatty degeneration are the most common of these. But we may also have placentitis, hypertrophy and induration, and finally hemorrhage into it of an apoplectic character."

At the end of the fourth month, the average length of the foetus is $5\frac{1}{2}$ inches, and its weight 3 ounces. At the end of the fifth month, it is 6 inches long, and weighs about 6 ounces, but movements are plainly felt by the mother. At the end of the sixth month, the weight is about 1 lb, and the length 9 inches. Abortion is termed *miscarriage* or premature delivery, when it

happens after the seventh month, but before the full term. At the end of the seventh month, the weight is 3 lbs., and the length 13 inches; at the end of the eighth month, the weight is 4½ lbs., and the length 15 inches. At full term the weight is from 6 to 8 lbs., and the length 18 to 20 inches. Premature expulsion of the foetus is of course, more dangerous in the later months than ordinary labor, chiefly from the greater liability to hemorrhage, which is often very great; partly from the difficulty in extracting the placenta and all the foetal membranes. For the attachments of the placenta and membranes are less firm during the last four weeks of gestation than at any other time, as then a gradual disintegration and separation of the membranes from the uterus is taking place. It is the absence of this normal and gradual separation which renders it so difficult to secure the mechanical detachment and expulsion of the secundines in premature deliveries.

Dr. Whitehead, of Manchester, thought that abortions were, by far, most common during the first three months of pregnancy especially during the first month. After the third month, up to the sixth, that the greatest number took place in the fourth month, a smaller number in the fifth, and the fewest in the sixth, the proportions being as 9 is to 5 and 1; while in the last three months, only $\frac{1}{4}$ of the number of cases occurred, that presented themselves in the second three months. Thus of 20 cases, 15 would occur in the first three months; 4 in the second three; and only 2 in the last three. But in 602 recorded cases, only 35 are credited to the first two months; no less than 275 to the third month, and 149 to the fourth; while only 30 cases supervened in the fifth month; 32 in the sixth, 55 in the seventh, and 28 in the eighth. Hence, the third and fourth months, when the placenta is being formed, is the most dangerous period.

Again, the first pregnancy is not the most dangerous time, but the third and fourth, and subsequent pregnancies, and the one or two which just precede the change of life. Meadows thinks

that about 1 woman in $3\frac{1}{2}$ aborts; and of 327 aborting women, 166 did so once; 103, twice; 41, three times; 11, four times; 3, five times; and 1 each 6, 8, and 9 times.

When the uterus and its contents are healthy, many of the causes of abortion are reflex, and act directly upon the contractility of the uterus before there is any disease of the foetus, placenta, or membranes. Thus an irritation may start from the alimentary canal from the presence of faecal accumulation, ascarides, violent purgation, or diarrhoea, dysentery, etc. In these cases the child is probably healthy and alive until expulsion is accomplished.

In another class of cases the blood of the mother is at fault. A plethoric condition may produce an apoplectic state of the uterine sinuses which form the maternal portion of the placenta. Blood is then extravasated between the ovum and the uterus and expulsion must take place. Or Anæmia, general debility, insufficient food, exhausting discharges, severe mental or bodily suffering may lessen the supply of blood to the placenta, atrophy of which, and consequent death of the child may occur. Chronic lead poisoning produces a form of anæmia most fatal to the foetus, and is attended with great contraction of the placental vessels, and most injurious blood contamination.

TREATMENT.—Of all the remedies for preventing abortion, arising either from congestion or irritability of the uterus, *cannabis indica* is probably the best. Clendenning was one of the earliest advocates of the remedy, and used it largely. He thought it acted as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cramps; as a nervine and stimulant in removing languor and anxiety, and raising the pulse and spirits, without any drawback or deduction on account of indirect or incidental inconveniences; for it produces tranquil sleep without causing constipation, nausea, or other effect or sign of indigestion, or headache or stupor.

Russell Reynolds found it to relieve neuralgia and spasms of

the womb without interfering with any of the functions of organic life, or producing any of the after sufferings, or miseries which follow many opiates. It improves the appetite and digestion, sometimes inducing almost canine hunger; and has long enjoyed a reputation against menorrhagia, which I can fully corroborate from abundant experience. Dr. Lever strongly recommends it in menorrhagia and painful menstruation. Finally, Churchill found great benefit from the tincture in doses of 5 to 20 drops every 2, 4, or 6 hours, in the hemorrhage which attends abortions. If administered in pill form, it should be given in combination with soap, or some other alkali, which always increases and develops its action very much. I give internally $\frac{1}{2}$ or 1 grain doses, and have occasionally seen a panic and subsequent prostration caused by 2-grain doses of good extract. Death has never been caused by it, so that the practitioner need never be alarmed when it seems to disagree; for occasionally its action sets in with a sudden strange sensation which is apt to cause trepidation, to which may be added a sensation of sinking in the stomach, with coldness of the surface and a weak, irregular pulse. Hot brandy and water, and a little cheerfulness on the part of the doctor, will soon remove all anxiety.

Iodoform, although discovered in 1822, and introduced as a remedy by Dr. Glover in 1837, has only attracted attention recently. It is a very powerful local anesthetic, for a suppository containing it, if introduced into the rectum, will so benumb the parts that defecation may take place without the patient being aware of it. It is useful in painful ulcers, even when they are cancerous, according to Dr. Horatio C. Wood, serving to alleviate pain, and to promote cicatrization. In indolent leg ulcers it operates not only as a local anesthetic, but as a decided stimulant to nutrition and healing. Of course, its application is most promising in cases of great irritability of the uterus, and of ulceration of the os and cervix. The only drawback to its use is its disagreeable and diffusive taste and smell. I have repeatedly known suppositories of it introduced into the rectum

and vagina followed by a sense of the taste of the drug in the mouth. But as the whole atmosphere about the patient is apt to become impregnated with its odor, the taste of it may have been conveyed in that way.

OPIUM is the remedy which is most frequently used, when abortion arises from accident, mental causes, or habit. Lever has known the exhibition of opium by the mouth, or what is better a suppository, or a cold starch injection, with opium, thrown into the bowel, and repeated every night, or oftener, followed by the best result. The application of cold, perfect quietude, and unstimulating diet should be enforced.

When abortion has taken place, especially if it has been attended with much loss of blood, opium may be given to allay excitement, tranquilize the circulation and procure sleep. In those pains which precede the establishment of labor in the latter weeks or months of gestation, opium may be given with great advantage. Many a patient, says Lever, has been carried on to the full end of her term, even after the liquor amnii has been evacuated, who, but for it, would have prematurely parted with her offspring.

But when abortion occurs from foetal, or placental disease or imperfection, so that the premature emptying of the uterus is but an effort of nature to get rid of what she cannot complete, and if, with the discharge, there is a patent state of the os, and if the cervix be soft and loose, the exhibition of opium will only retard what, sooner or later, must take place. Dr. Meadows prefers the Liquor Opii sedativus (Battley's?) which has long enjoyed a reputation as an anodyne and sedative, superior to the tincture of opium, but as it is nearly 50 per cent stronger, the dose is therefore only 10 to 20 minims. Meadows thinks it is more soothing, less likely to disagree, and more efficacious than any other preparation, when given in full doses of 20 to 30 drops. Squire prefers the solution of the Bi-meconate of Morphia, of the same strength and in the same dose as tincture of opium. It is supposed to confuse the head, disturb the

stomach, and constipate the bowels less than any other preparation of opium. I have often preferred the wine of opium, prepared with the addition of the tincture of cinnamon and cloves; or the vinegar of opium, prepared with aromatic vinegar.

Dr. Tanner speaks very highly of assafctida, in the troublesome cases of repeated miscarriage, occurring in weak and irritable women, in whom there is no vascular congestion, or any specific disease. Even Sydenham regarded it as a uterine tonic.

Among the numerous astringents, *Gallic Acid* is the best, and I generally rely upon it, in doses of 10 to 20 grains several times a day.

An entirely different class of remedies, viz., *Ergot* and *Savin*, have been decreed to act as uterine tonics in a very high degree. Meadows has had no experience with the latter, but from Ergot he has seen decidedly good results. Although he thinks that the dose should be small, so as not to produce any uterine contractions, he usually orders 10 minims of the fluid extract every 4, 6, or 8 hours, for 2 or 3 weeks at least, at about the time when the abortion is expected, from previous experience, to occur. But the use of Ergot seems more safe and rational under other circumstances, viz., when the hemorrhage has been so profuse as to remove all hope of saving the embryo, there being doubtless a free separation of its structures from the uterus. It will then be useful not only in arresting the bleeding, but also in exciting the uterus to throw off its contents.

Borax and *Cinnamon* have been recommended for the same purpose. As the principal action of Ergot is to cause contraction of the capillaries, and as it does not cause spasm of the muscles until the small blood vessels have been entirely emptied of their contents it is possible that Ergot may be used beneficially, if not always safely, in order to relieve congestion of the uterus or placental sinuses and vessels, even during the pregnant state; but Gallic acid, will always remain the safer remedy, for Dr. Ramsbotham induced labor in 26 cases at the 7th or 8th month, with Ergot alone, without interfering with the mem-

branes. All the mothers recovered, but 14 of the children were still-born, and 8 more died soon; forming a larger infant mortality than when labor is induced in any other manner. It is said to be useful in dropsy of the amnion, and placental apoplexy.

Sabina is a powerful stimulant to the uterine system which, Horatio C. Wood says, may be used in small repeated doses in *atonic* amenorrhœa, while its powers in menorrhagia, dependent upon a relaxed state of the uterine tissues, are decided to be even more pronounced. In uterine diseases of the sthenic type it is strongly contra-indicated. The oil is the only reliable preparation, and the dose in amenorrhœa, passive and uterine hemorrhage, is from 5 to 10 drops, repeated every 3 or 4 hours. In habitual abortion depending upon diminished vitality of the uterine system, Dr. Metsch speaks highly of it. He used from 2 to 4 drachms of the herb, in 6 ounces of hot water, and gave table-spoonful doses twice a day during the intervals of the menstrual periods only. He wisely says—"care is required in its use." I know of cases which have been relieved by *Sabina*, and there may be a small class of invalids in which it is the very best remedy; but like Iron in the anæmic debility of aborting women it may be well to defer its use until after other rational remedies have failed. Wood says: a generally supporting and tonic plan of treatment is required in some cases, but it may be well, as a rule, to avoid chalybeates as these are thought sometimes rather to encourage abortion than otherwise, and should that occur the practitioner may be blamed. At the same time, in cases of general atony with anæmia, ferruginous preparations are undoubtedly of great service.

Dr. Burns, of Philadelphia, speaks very highly of *Arsenic* as a hæmostatic in these cases, given in the enormous doses of 20 minims of Fowler's Solution, repeated every half hour until some decided effect is produced; for which he, doubtless, did not have to wait long.

When there is reason to suspect syphilis as the cause of pre-

vious abortions, the bi-chloride of mercury has been found valuable by Meadows ; and in fatty degeneration of the placenta Sir James Y. Simpson relied upon the chlorate of Potash. Arsenic has been given for the same purpose. Fibro-fatty degeneration of the placenta is more difficult to reach, and Phosphorus has been relied upon for its cure.—*West Va. Med. Student.*

THE TREATMENT OF CHRONIC DYSENTERY.

Mr. R. Donaldson, writing from Rangoon to the editor of the *Indian Medical Gazette*, June 1st, recommends the compound tincture of benzoin as a most efficacious remedy in dysenteric affections. He says that, in Burmah, dysentery is a very common affection, and in the European, as well as in the native, exhibits a marked tendency to become chronic. In many of these cases, ipecacuanha appears to have little or no effect; and persistence in the treatment by large doses of this drug, far being productive of good, is fruitful of positive mischief. The stomach is rendered so irritable by it, that the patient is unable to retain nourishment; and he then suffers from exhaustion, the combined effect of the disease and innutrition. In these cases, the tincture of benzoin, given in combination with astringents—notably with logwood—has been found extremely useful; often, indeed acting like a charm; and it may be truly said of it, that its powers of healing diseased mucous membranes equal its performances when applied externally to wounds. The formula recommended is : Compound tincture of benzoin, half a drachm; compound tincture of catechu, one drachm; tincture of opium, ten minims; extract of hæmotoxylon, ten grains; water, to one ounce; for a draught to be given three times a day. If necessary, the remedy may be administered by the rectum. It would appear that the compound tincture of benzoin is an old, and at one time, a well-known remedy in dysentery, as well as in simple mucous diarrhœa and in chronic infantile, inflammatory diarrhœa, in which the evacuations always contain mucus, and sometimes a little blood.—*British Med. Jour.*

A CERTAIN CURE FOR RHEUMATISM.

Judging from his article in the *Wiener medizinische Presse*, Dr. Franz Heller is an enthusiast in the administration of caustic ammonia in rheumatism. For several years he had been a sufferer from severe muscular rheumatism in the right shoulder; he had taken all the common anti-rheumatic remedies with but little alleviation, when he began to reason that in rheumatism, as in gout, there may be a uric acid diathesis; he thought that liquor ammoniæ, on account of its rapid volatilization, would be the remedy most readily absorbed, and the most prompt in action. In almost the same moment, in which he took one drop diluted with water, he felt a complete relief from the pain which had lasted for ten hours; he was now able to move freely the arm which, an instant before, he could scarcely bare to have touched. The remedy, he claims, has proved a positive cure in all recent cases of muscular rheumatism which have fallen under his observation; he cites numerous cases in which relief, as instantaneous as his own, was experienced.

He also observed its effects in several cases of acute articular rheumatism, in two of which six drops sufficed to subdue the pain and swelling within a period of twenty-four hours.

In one case of chronic rheumatism of a finger joint, which had lasted for over half a year, the simple administration of the ammonia completely dispelled the inflammation and pain in the joint within two days.

He then discusses the mode of action of his remedy. "If we consider an excessive acidity as the cause of the rheumatism, we can scarcely claim in the cases in which one drop will instantaneously relieve the pain in recent rheumatism, that that one drop was sufficient to counteract the effects of the excess of uric or (according to Fuller) lactic acid.

"Nothing remains therefore but for us to seek for the source of rheumatism in a morbid nervous activity induced by disturbances of nutrition, and to believe that the ammonia acts as a nervine directly upon the nerves."

After the cure of one attack of rheumatism, our object should

be to put the patient in such a condition as to prevent their recurrence. This, the writer thinks, can be done by building up the general system, and thus diminishing the nervous excitability.—*The Clinic.*

Ars, ante omnia veritas.

Editorial.

THE MEETING OF THE STATE MEDICAL SOCIETY.

As announced in our last issue the Michigan State Medical Society will hold its 10th annual meeting at Ann Arbor on the 10th inst. In many respects this meeting will be one of the most important, as well as the most interesting, of any in the history of the society. From the nature of the subjects which it is generally understood will come up for discussion, the attendance will doubtless be large. The question which, outside of those of purely scientific interest, will most prominently engage the attention of the society will be that which has for the past twelve months been so freely ventilated, not only by the physicians of this state but also by the profession throughout the entire country. Never before in the history of medicine in America has such a question arisen, and its solution by the state society will be awaited with much interest. It becomes this society, therefore, to divest itself of the local prejudices and personal animosities which we fear have had too large a part in the discussion which is now about to culminate, and to consider the matter with that breadth, liberality and catholicity which should distinguish a scientific organization. After the lapse of the preceding twelve months, a much more fair and impartial consideration will be given it than would have been possible at the last meeting of the state society, and the laying of the matter on the table at that meeting was a very judicious act. The aversion of the profession to the system with which the medical department of the University was apparently affiliated precipitated many, who have since regretted their hasty action, into active and violent opposition to the position taken by the

Faculty. Among these are notably several of the leading medical journals of the country whom the enemies of the University have delighted to quote as opposed to the existing state of affairs. The Philadelphia *Medical Times*, the N. Y. *Medical Record*, the Richmond and Louisville *Medical Journal*, and the Louisville *Medical News*, originally bitterly in opposition, are now convinced that no better disposition of the matter could have been made than the plan now in operation. Cautious and conscientious practitioners have deliberated on the matter for the past twelve months, and now unable to suggest a more feasible plan of dealing with homœopathy, endorse that adopted by the Board of Regents. True, there is still some rabid opposition, kept alive by parties whose interests it is not difficult to see would be subserved by anything calculated to detract from the fame of the medical department of the University. Those, however, whose opposition has this foundation are comparatively few, and we believe that the great body of the State Society will repair to Ann Arbor with the honest purpose of counselling as to the best means of settling a disagreeable affair.

We have nothing to add by way of argument in favor of the existing plan. We have expressed ourselves freely on the matter, and are now ready and perfectly willing to submit it for the adjudication of the Society.

This much, however, we do ask, and that is that should the Society, peradventure, consider the existing plan the wrong one it shall submit a less objectionable method of dealing with the menacing evil. The profession of Michigan cannot escape dealing with the question. Homœopathy cannot be subdued by ignoring its existence, and while we are not irrevocably committed to the present method of dealing with it we cannot abandon it without a substitute.

The notice of a number of books, together with the usual monthly mortality report, is necessarily postponed to our next issue.

THE
PENINSULAR JOURNAL
OF MEDICINE.

JUNE, 1876.

Original Communications.

A CLINICAL LECTURE ON THE TREATMENT OF PNEUMONIA. By A. B. PALMER, M. D., Prof. of Pathology and Practice of Medicine in the Department of Medicine and Surgery in the University of Michigan. (Lecture 1.)

GENTLEMEN.—Between two and three weeks ago, I was requested to see a gentleman, a member of one of the other departments of the University, who, at my request, has been kind enough to come before you, who was laboring under an attack of disease, the history of which I propose to present, as illustrative of the influence of a mode of treatment of pneumonia to which I wish to-day to call your attention.

I should not bring to your notice a single case as proving the efficiency of any mode of treatment, could I not assure you that such case was a sample of many others, as this one certainly is.

I regret that I have not a full and minute record taken at the

time, but the occurrence was so recent, that my memory is distinct as to all the important points, and the medical students who had charge of the case and saw this gentleman with me, will be able to confirm the substantial correctness of my recollection.

Some days before I saw Mr. ——, he had been suffering, having been previously in good health, with what he considered a severe "cold," having a cough and slight feverishness, for which he had taken some unimportant expectorants. In the afternoon or evening previous to my seeing him in the morning, he was attacked with a severe and protracted chill, with pain in his right side, described as deep and heavy; the chill was followed by a "high fever," pain in the head, injected eyes and labored breathing, and a profound sense of illness. When I first saw him, his pulse was 110 per minute, his face had a red and purplish flush, his temperature under the tongue was 105° F., breathing thirty-six per minute, cough frequent, with a moderately tenacious, and more than usually bloody expectoration. On physical examination, the lower part of the right lung was found to move a little less freely than normal, the percussion note was not markedly changed, though slightly duller than normal, arising, as was believed, from hyperæmic engorgement; and there was over the same part heard, on auscultation, a moderate degree of coarse and moist crepitation, doubtless from the hæmorrhagic and rather mucous exudation, but this was not marked, and there was no dry, fine, crepitant rale, characteristic of the more plastic exudation into the air cells and minute bronchioles, this stage of the disease not having yet arrived; and of course there was no distinct bronchial respiration. The respiratory murmur, though faint, was heard, of a harsher quality than normal, and in some points nearly suppressed.

It had been my custom for many years, when seeing a patient in the early stage of pneumonia, to make a decided effort to induce a speedy resolution; and the means I have longest made use of, and I must say, usually successfully, is the administration of free doses—two, three, or four—of an opiate, modified in its

action by a moderate quantity of ipecacuanha and a few grains of blue mass, bringing the system under a full relaxing effect of the narcotic, which is kept up for several hours, almost invariably inducing free perspiration, reducing the temperature, and effecting the result of arresting, or at least, very markedly checking the progress of the disease. This is followed the next day by a saline cathartic, and usually but little other treatment will be required.

In this case, from the bronchial and congestive symptoms which had for some days preceded the more decided pneumonic attack, I feared these means might fail in arresting the disease and so expressed myself to the students who were present, but still determined to make the effort. I accordingly prescribed as follows :

R Sulph. of Morphine gr. j.
Dover's powders 3j.
Blue Mass grs. viij.

Divide into four equal parts, one to be given immediately, another in two hours, and the third and fourth at intervals of from three to six hours, according to the effect, keeping up a decided anodyne, relaxing and moderately narcotic action, but such as would not interfere too much with the respiratory function. At this *early stage* of the disease, I had, however, no fear of dangerous apnoea being induced by these doses in a vigorous young man, as exudation had not yet occurred to a sufficient extent, as might have been the case at a later period in the disease, to forbid this free use of the opiate.

Under this treatment a free perspiration occurred, the pulse came down to about 90, and the temperature to a little over 100°. As the effect of the narcotic doses the next day subsided, a saline cathartic was ordered, which operated after some hours, but as the effect of the opiate disappeared, the fever, cough, headache, pain in the chest and bloody expectoration returned; and in about 36 hours after the first dose of the opiate was given, all the symptoms presented themselves in an aggrav-

ated form. On examination however, the physical signs of exudation had not materially increased, but the temperature under the tongue was 106° , the pulse was 115, the face was deeply flushed, and the patient was stupid and delirious. I then ordered thirty grains of Sulph. of Quinine to be divided into five equal parts (six grains each) and one to be given every three hours. One of your members, a senior medical student, who remained with the patient, was much surprised to find that an hour or two after the first dose, all the symptoms remarkably abated, a free perspiration occurred and a comparatively quiet sleep ensued. The quinine was commenced in the evening. The next morning I saw Mr.——. The pulse was then down to 85, the temperature taken as before was but a little above 98.5° , the headache and delirium had completely disappeared, the tenacious and bloody expectoration had greatly diminished, and I had the satisfaction of regarding the patient as already convalescent. After taking these thirty grains of quinine, no further medicine was deemed essential, though as some cough and a feeling of heaviness in the affected side continued, a mild expectorant mixture in each dose of which was five grains of iodide of potassium, was ordered to be repeated once in six hours, for a few days. In three days afterwards, Mr.—— very imprudently walked down town and back to his room, a distance of more than half a mile, but apparently without material injury; and has since been attending to his duties in the college. He now considers himself as quite well, and as you see has no appearance of being otherwise.

Other cases of similar attacks, some of them being further advanced and presenting still more unequivocal signs of Croupous Pneumonia, having the fine crepitation, etc., have yielded to the effects of quinine in a similar manner as has been witnessed by members of the class now present. All, to be sure, have not yielded as readily, and completely as this case, but I can assure you gentlemen, that this is by no means entirely exceptional.

You will particularly observe that the treatment with the

opiates was commenced at an *early stage* of the disease, before any material anatomical changes had occurred, before the plastic exudate was poured into the air vesels to any extent, and before the texture of the tissues was much impaired; though from the extreme congestion, blood was poured into the smaller tubes from rupture of the capillaries more than is usually the case at this or any other stage of pneumonia, and you will also observe that during the time, some 24 hours, which the system was under the opiate, not only was the fever kept in abeyance, but no perceptible change occurred in the physical condition of the diseased lung; plastic exudation seemed not to have gone on. Certainly neither dullness on percussion or crepitation had increased, the respiratory murmur was as distinctly heard as before, and bronchial respiration was not developed.

It may be said that in the absence of these conditions, the evidence of pneumonia was imperfect, but the rational symptoms were as marked as possible, and in the ordinary cases of pneumonia these physical signs do not present themselves at so early a period as that at which the treatment commenced.

When an inflammation has gone on for days, when extensive exudations have occurred and the vitality and structure of the tissues of the part have been materially changed, a speedy restoration to the normal condition cannot be effected, as may be, before such changes have been established.

Many physicians who are the authors of our books seldom see cases of acute disease except in consultation or in hospital practice; and in both these classes of cases, the disease has almost invariably gone on for days before coming under their observation; and as such cases are not brought to a speedy termination by the means employed, they become skeptical as to inflammatory processes being arrested by any treatment; and some, like the late Dr. J. Hughes Bennett, declare that an inflammatory process must run its course, and the sole duty of the physician is to sustain the patient and palliate symptoms while the disease accomplishes its necessary cycles. That we have not

yet learned, and may never learn to arrest some diseases,—such as small-pox, measles, etc., is too true ; but that other diseases may be cut short, such as the different forms of malarial fevers, is also true ; and I have no doubt, from, I think, abundant experience, that many inflammations, and among them pneumonia, may be cut short in most cases ; and very generally, when taken in the *early stages*, may be brought to a speedy end.

If this be a fact, the importance of the fact can be scarcely over-estimated. Pneumonia is one of the most common diseases of a severe character with which the physician meets—and it is certainly one of the main outlets of human life as all vital statistics prove. I have asked this gentleman to come before you, and have detailed with such minuteness his case, in order to emphasize more distinctly and more forcibly what on other occasions I shall have to say upon the nature, and especially the treatment of this interesting, this common and this severe disease.

But before leaving this subject, I wish to relate to you one other case, which though having occurred a longer time ago than the one already detailed, is quite as vivid in my memory, as it occurred in my own person.

Last summer, when away on my vacation, after a night of exposure and a feeling of indisposition during the early part of the day, I was taken about 4 o'clock P. M. with a chill lasting something more than an hour, followed by a fever which at six o'clock showed a temperature under the tongue of 104.5° F. There were general pains in the head, back, etc., injected countenance, a feeling of dizziness and confusion in the head, a sense of fullness and weight, and a dull heavy pain in the right infra-mammary region, with some degree of dyspnoea and cough. The general sense of illness was great, and I had no doubt of an attack, and it seemed to me a severe one, of pneumonia.

I immediately sent for quinine and morphine, and about 9 o'clock took six grains of sulph. quinine, and what I judged ^{to} be one-third of a grain of sulph. morphine. In about ~~two~~

hours I took five grains more of quinine, and after that repeated four grain doses of this article once in three or four hours, until about half a drachm in all was taken. Before the second dose was taken perspiration commenced, with roaring in the ears and some degree of deafness, which was kept up till some hours after the last dose was taken. The fever abated with the occurrence of perspiration, and the next morning when the thermometer was used the temperature was found to be about the normal standard, the pain in the side had disappeared, the cough abated, though for a few days a moderate sense of weight in the side and an occasional slight cough continued. There were, however, no more active symptoms, and nothing further was taken besides a Seidlitz powder or two on the second day.

That this was an attack which if left to itself would have developed into a severe form of pneumonia I have no doubt, and of course I attribute to the treatment commenced at this early period—the incipiency of the disease—the complete restoration to health which speedily followed. In conclusion for the present, I must say to you that this is not a solitary and exceptional case. It is seldom, however, that we have an opportunity of commencing treatment at so early a period of the disease, but I have not unfrequently witnessed similar, though perhaps not quite as speedy results, when the treatment was commenced many hours later.

The significance of these facts, and the principles they involve, I propose to consider at the next lecture.

VACCINATION. By AUG. KAISER, M. D. Detroit.

MR. PRESIDENT AND GENTLEMEN OF THE WAYNE COUNTY MEDICAL SOCIETY.—The value and signification of vaccination cannot well be understood unless one is acquainted with the terrible enemy against which it is directed. The knowledge of the role which small-pox has played in the world forms a necessary pre-supposition of true judgment concerning the value of the recommended and customary preventative. I may, therefore, be allowed, as briefly as possible, to give the history of small-pox :

It is not historically certain whether small-pox originated in Asia or Africa, but all historians agree on non-European origin. Neither do we know precisely how it first came to Europe—whether through Spain, in consequence of the invasions of the Arabs, or whether it was carried to Italy by Roman soldiers returning from some of their campaigns. So much, however, is settled, that it had already been largely propagated in the southern part of Europe at the beginning of the sixth century. The wars of this country were very favorable to the spreading of this *so* contagious plague; and soon we see France, England, Denmark, Sweden invaded by the disease, in the beginning lightly, later, permanently. The foot soldiers of the Emperor Maximilian I, it is said, carried it to Germany in 1493. It was carried from England to Iceland, by the way of Russia to Siberia, and it is a noticeable fact, that whilst small-pox originated in tropical regions, the extreme north became the fertile soil of its most dangerous forms. Small-pox came to the western hemisphere—to America—fifteen years after its discovery, through Spaniards, and soon was the cause of greater devastations to the natives than the sword, the gun and the whisky of the Europeans. Whole Indian tribes were destroyed, and the poor savages believed that a bad spirit came upon them to destroy all animation. The most important feature in this respect as regards America, however, is the importation of slaves from Africa, so much so, that each small-pox epidemic may be referred back to the dragging in of negroes.

Small-pox is undoubtedly the most severe of plagues with which humanity ever has been scourged. Few other contagious disorders can be compared with it, either as to age, or to the number of victims. In Europe during the last century, there were yearly one-half a million deaths caused by small-pox, generally 20 per cent., and in several epidemics from 30 to 50 per cent. In Berlin eight to ten per cent. of the population died yearly. There were 25,000 fatal cases in the year 1796 in Prussia, which, at the time, was but a small province. In Germany,

yearly, about 70,000. In Sweden, within thirty years, from 1774 to 1803, about 130,000 individuals died of small-pox. In France we have had epidemics with from 60 to 70 per cent. mortality. Iceland lost out of 50,000 souls 20,000 through small-pox in the year 1707. Siberia became partly another country, whole nations were swept away. We may take it for granted that small-pox epidemics in every country, before the year 1800, killed 1-10 and crippled 1-5 through blindness and other incurable diseases.

The English Hippocrates, Sydenham, pronounces small-pox the most horrible disease as demanding more victims than gunpowder, others speak of it as an inevitable pest. A German proverb during the last century was, that "very few individuals remain free from small-pox and love."

Long and well established conviction, that the disease once actually here, cannot be stopped, has created the universal desire to invent remedies either to divert the disease, or if inevitable to put a stop to its most dangerous forms.

It is said of the oldest nation, the Chinese, that they clad their children with shirts which were impregnated with small-pox, and that they put minute small-pox crusts into their nostrils. We find then in India a likewise practice of infecting themselves with the disease by pulling strings impregnated with lymph through the skin of the forearms. This practice was chiefly to be met with in Georgia and Circassia, where in order to preserve the beauty of girls, old women performed inoculation under the most superstitious ceremonies.

In North Africa and even in Europe, in the earlier centuries, we find inoculation practiced. In Greece, especially in Constantinople inoculation was customary at the beginning of the last century and here it was termed 'buying small-pox,' and fixed prizes were paid for it. In Europe, this practice was refined and simplified by using pomades impregnated with small-pox virus, by sleeping with small-pox patients, by placing children in the same beds, and it was not until some time afterwards that

lancets and needles came into use. This procedure was termed inoculation of true small-pox and it has become historical.

One may ask surprisingly, how persons resorted to such a wonderful practice, how they came to the idea of inoculating oneself with a poison which was held to be the most terrible pest, to incorporate a disease, to have escaped which, was a rare occurrence.

The apparent absurdity explains itself as follows: Generally speaking, a person having had small-pox once, is protected against a second infection, and secondly, it is also a noticeable fact, that the so-called sporadic cases are usually milder and less dangerous. These two facts form the basis of inoculation of true small-pox virus.

It was a lady that gave the general impulse to the introduction of inoculation of small-pox virus into Europe. Lady Mary Worthly Montague, the wife of the British Ambassador in Constantinople, who there got information of the great practice of inoculating, had in the year 1718, the courage to have her two sons, and four years later on returning to London, her daughter inoculated with small pox virus. This bold action caused great commotion in London, and the King immediately gave an order, that inoculation should be performed in Newgate, on seven individuals condemned to be hung, and not only were they pardoned, but also protected against the severest form of small-pox, to which they were exposed after successful inoculation. The children of King George I. were inoculated in 1721, as also the children of some of the noblest families and thus inoculation became universal in England.

This new discovery soon found its way to the continent and across the ocean to North America. The French, the Prussian, the Saxon, the Austrian and other courts soon followed the English example. The Empress Catherine, the first who had herself inoculated in order to give example to nobler families, paid 10 silver rubels to each of her subjects who got his child inoculated. A public inoculation institute for the poor was

erected in London in 1746, and the Royal College of Physicians gave in 1754 to the new discovery their weighty sanction.

Inoculation in general gave satisfaction and protected thousands, but with extensive practice, also the dangers of inoculation became known. Not always was the disease so mild as the case from which the inoculation virus was taken, but frequently the most severe small-pox followed inoculation. Inoculation was prohibited by legislation in 1763 in all France, yet the fear of small-pox from which Louis XV. had died in 1774 was so great, that Louis the XVI. with his Princess were recently inoculated, and it was only the great discovery of vaccination of cow-pox that finally gave the death-blow to inoculation.

Amongst several of our mammalia, especially cows, horses, sheep and hogs, pox is a not uncommon disease, but it is generally overlooked on account of the mild forms. In cows, the pox is limited to the udder and the teat in larger, but exactly similar suructure to the human.

Warmth, greater sensation of the parts and diminution of the daily quantity of milk are the only symptoms manifested. The disease generally shows itself in a sporadic form, seldom in an epidemic, or rather epizootic, and is usually brought from one cow to the other by the fingers of the milkers. In horses, also, there is no general eruption, but it appears on the pastern-joint in form of small blisters filled with pus. Comparative observation and numerous experiments have shown a new relation between the cow, the horse and the human pox—the near relation, not the identity. In all three there is a fundamental process, which is closely localized in the cow and the horse, showing itself in a mild form, while the human body is covered with them, showing themselves highly distinctive. Small-pox once endured, generally destroys the susceptibility of the poison for life-time, and vaccination with cow-pox, at least for a number of years. Horse pox affords the same protection, while the sheep and hog pox do not.

The knowledge of the protective power of the cow-pox against

small-pox has existed for centuries in different countries. The Hindus speak of it, and Alex. v. Humbold found it to be a lively tradition among the shepherds on the mountains of Mexico. Those people came, through repeated experiments, to the knowledge that such persons as milked cows affected with the pox, coming in contact with the virus, causing eruption on their hands, were protected in later occurring epidemics of small-pox, hence showing no susceptibility.

Only in this way, through communication with shepherds and herdsmen did the physicians come into the possession of the knowledge of a fact which properly used, was intended historically to become of vital importance.

The English physician Jenner, was not the first one who discovered vaccination, but he was the first to bring this new discovery, to which his name is forever attached, successfully before the public. In 1778, he began to examine experimentally the existing ideas of country people, concerning cow lymph, and it was only after 20 years of labor, that he came before the public, entirely convinced of the protective qualities of vaccination. The 14th of May, 1796, is the birthday of vaccination, when Jenner performed the first public vaccination in Berkeley, in Gloucestershire, on a boy named James Phillips, eight years old. The virus he used was taken from a girl named Sara Nilm, who having cut her hands whilst working in the corn field, went afterwards to milk cows suffering from pox, and thus unwittingly became infected. Two months afterwards, by way of experiment, Jenner inoculated the boy with small-pox virus; it did not take—a second vaccination was tried, which also did not take. Jenner came to London in 1798, and excited, through his pamphlet in which he had the cases of successful vaccination reported, deserved attention. The discovery found approbation and was henceforth sustained. In a little more than one year there were 19,000 individuals vaccinated in London—on 5,000 of them proof inoculation with small-pox virus was performed and none took.

In 1801, we find in Vienna the first public vaccination institute. France, Italy, Switzerland soon followed. The use of vaccination soon came across the ocean, in 1800 to North America, 1802 to East India, 1803 to Greenland, Java, etc., etc.

Since 1810, there exists in Prussia indirect vaccination. No one is legally forced to get vaccinated, but no child is allowed to go to public schools, and no one admitted to State offices, unless he has been vaccinated. At first all the world believed with Jenner, that one vaccination would protect for life time. But in the second and third decenary of this century, about 15 to 20 years after the first introduction of vaccination when again epidemics broke out, and individuals, who had in their youth been successfully vaccinated, were taken by the disease, it was shown that the primary hopes were too extravagant. Experiments further showed, that if vaccination was performed on those who had been vaccinated in their childhood, it would again take, showing that susceptibility was again restored.

Preventative power of the first vaccination is individually in general 15 to 20 years, so that re-vaccination is recommended between these years. A second vaccination protects, according to made experiments, for life. It is only in rare individuals, that such a mighty disposition for small-pox is found, that even a second vaccination only protects them for a number of years; yet these are exceptions.

But I am sorry to say, that the conviction of the necessity of re-vaccination is not universal and that in consequence hereof, society is continually exposed to unnecessary danger. .

Is vaccination a great aberration of human mind and of civilized society, or is it one of the most brilliant discoveries of all ages and a triumph of human mind in conflict with an adverse power of nature opposing it? Is it a blessing for all races, or a curse? Both views have their interceders. Vaccination has enthusiastic eulogists and boundless opponents. Let us put aside those numerous attacks and calumnies not worthy of refutation, which it has suffered. Some even have pronounced it to be an af-

front and encroachment on the hands of Providence ; others have declared it to be an animalization of human mind. Let us drop this absurdity and let us stick to the essence of the subject. I again resort to history.

We all know well that compulsion immediately sets the Englishman to the side of opposition ; so also the law which was passed in Parliament in 1853, making vaccination compulsory, caused so much bad blood, that in 1855, the question, whether the legislature had the right to pass an act making vaccination compulsory, was laid before the house of Lords. In order to do justice, the whole matter was placed before the general board of health which propounded four cardinal questions concerning vaccination. These questions were put to 539 medical authorities and bodies of Europe, America and Asia, and as this scientific examination was supported by the governments of these different countries, through the most extensive statistic resources, such thoroughly investigated material was gathered, that a true opinion concerning the essential points of vaccination was capable of being given. The first of these questions was : Whether vaccination protects, in the greater number of cases against small-pox and gives an almost absolute surety against a fatal termination. Five hundred and thirty-seven out of five hundred and thirty-nine authorities answered this in the affirmative, based on positive proofs. One known in the German medical community as a "cross-head," and one English physician preferred inoculation of true small-pox virus to cow-pox.

The numbers and data which were presented to prove the protective qualities of cow-pox, fill a large volume and comprise millions, and here I may mention, that in such countries where vaccination is introduced, small-pox has diminished extensively and intensively, while it rages with destructive severity in such countries where prejudice and ignorance have opposed vaccination, whence we have their general quota of mortality statistics of the population. Just as convincing is a second proposition, which being easier to get hold of, is easier to control.

Infancy possesses the most vivid susceptibility for small-pox, this is so positive an experience, that small-pox was considered by physicians of former centuries, by preference, a disease of children, as to-day with us those inflammatory eruptions, scarlatina, and measles. But how does this to-day compare with us, where it has become customary to vaccinate children in their earliest infancy? Small-pox is no longer considered a disease of children but of adults. Vaccination as it protects the child postpones small-pox to later years. That vaccination does not protect from small-pox in each and every case has its explanation in the following fact, that single or rather isolated individuals possess so great a susceptibility for small-pox, that even a second or third vaccination cannot suppress this unhappy disposition entirely. But in order that vaccination should fulfil its task, it must be performed in a right manner, a number of pustules must have normally suppurated, and re-vaccination must be performed between the 10 and 20 years in order to destroy susceptibility definitely. The militia of those States where re-vaccination is compulsory, gives the best proof of this assertion. For while small-pox was a continual plague of soldiers on account of the congregation of many, it has, since re-vaccination has been introduced entirely disappeared! And even a first vaccination, without re-vaccination, is it not an almost absolute surety against a fatal termination? The terror of small-pox under which former centuries trembled, has become for us traditional. Most of the cases occurring now are of a milder form, which usually ends without deforming or disfiguring. In The-ran, where vaccination was in its infancy, Dr. Pollack found in 1857, amongst the numerous blind, who were lying along the roads and streets, nine out of ten who deplored the loss of vision from suffered small-pox. This fearful fact not unknown in Europe centuries ago, affrights us no longer.

The second question of the London general Board of Health was, whether vaccinated individuals, because they remain free from small-pox, are more susceptible for typhus, scrofula, con-

sumption, and whether they encounter any other danger whatsoever? The opponents of vaccination have namely asserted, that said named diseases have greatly increased since the introduction of vaccination. The answering of this second question was as uniform as that of the first. That accusation depends upon the non-knowledge of history. We certainly use the name typhus more than physicians of former times, but not to designate a new disease, for we unite in it a number of diseased conditions, for which physicians of old had different names, as pituitous fever, slime fever, putrid fever, nervous fever, typhus fever, &c., &c.

But concerning scrofula, which is said to be nourished through vaccination, allow me to cite the remarks of the very celebrated physician Thorn White, who lived about the middle of the last century, therefore long before the introduction of vaccination; he says: putting small-pox and measles aside, there is in fact scarcely a disease more universal than scrofula.

Typhus, scrofula and consumption are, if I may be allowed the expression, social diseases, invariably depending upon the state of society and running parallel therewith. Their wide-spread ramifications which modern modes of living have encouraged, are not and never will be supported by vaccination, but their real nurseries are, the increasing and crowded population of large cities, the rising fabrics, the growing difficulty of the production of the necessaries for life, the always more complicated modus vivendi, and numerous other evils in advancement of culture.

The third question put by the general Board of Health was whether, through vaccination with pure cow lymph other general diseases as scrofula could be directly ingrafted, and whether a scientific physician could commit the blunder to take from the arm of a child any other diseased matter instead of vaccine virus and thus transmit the disease. The latter is impossible, for in order to discern true cow-pox no special scientific training is necessary.

Scrofula moreover, cannot be vaccinated for the very simple

reason, that scrofula is in no way contagious, because the interruption of nutrition, which we term scrofulosa, is formed always and ever, absolutely from the humors of the individual.

I do not want to assert that disease has never been vaccinated. But then the vaccinator has not as he should, taken the pure lymph out of a normal suppurated cow-pox, but has taken what he never was allowed to do, in gross and reprehensible ignorance and carelessness, another diseased product instead of the cow-pox lymph and communicated it to the vaccinated child; he has vaccinated the contagious disease, but not the cow-pox.

The fourth and last question refers to the time when vaccination should first be performed. The universal answer was that, that infancy was the most appropriate time.

It is immaterial in which season of the year we are to vaccinate. Cow-pox usually develops better, quicker and more vigorously in warm weather, without being more efficacious however, than during cold weather. Of greater moment is the question, whether it is advisable to vaccinate during a raging epidemic; many say no. I am however afraid that this idea has become detrimental to many a child which might have been saved through an immediate vaccination. For while vaccination is against small-pox by no means what iron is against lightning, when small-pox has taken hold of a place every one ought to be vaccinated.

Finally the protective quality of vaccination does not begin at the act of vaccination, but not until the tenth or twelfth day. Up to this time infection continues. Here defectiveness of cow-pox is not at fault, but we have to recognize and obey a certain law of Pathology.

Thus stands vaccination to day. Not based on the idea of a few or on spare and inconsistent facts. No, concerning the value of vaccination, science has spoken with extreme unanimity and an innumerable experience gives daily an infallible testimony in its favor. But the public, unaccustomed to the fear of small-

pox, has become indifferent and of the necessity of re-vaccination most of them are not aware.

Only when the initiative to vaccination originates from the public itself and when each and every one demands from his physician such protection against small pox, as he demands against other diseases, then and only then, will small-pox be put on the annals as historical plagues. Mankind has, as far as we can judge at present, small-pox in his hands.

DETROIT, April 29, 1876.

A NOVEL CAUSE OF INTRA UTERINE DEATH. By DR. A. FORD, Bowne, Mich.

Mrs. B——, aged about thirty-six, has had five children. All have been premature, and still-born except the first. Miscarriages between the eighth and ninth month—the last time at eight and-a-half month. Nothing unusual with her, till about seven months gone, when dropsy sets in and it is not confined to the lower extremities, but extends over the whole body, and after a time she becomes nearly helpless. No remedies seem to affect her. There is always a good deal of motion up to about seven and a half or eight months, when it ceases; and in about two weeks after labor sets in, and she is delivered of a still-born child that has the appearance of having been dead some time. She generally gets through before the doctor gets there. The last time, however, I was there in time. The cause of the death of the child had always been a mystery, but this time it was perfectly plain. The amount of liquor amnii was enormous. Could not say precisely how much, but it was sufficient to saturate the bed and run across the floor, forming a great puddle. When I examined the cord, I found it *twisted* until it would "kink." The uterus was so distended that the child was perfectly free to turn, and had turned the same way, till the circulation was cut off.

The phenomenon was new to me, as I do not recollect of ever reading of such a case.

Proceedings of Societies.

MICHIGAN STATE MEDICAL SOCIETY.

The tenth annual meeting of the State Medical Society was convened at the Opera House, Ann Arbor, on Wednesday morning the 10th ult.

The President, Dr. Wm. Brodie of Detroit, called the meeting to order, and presided during the sessions.

After an opening prayer by Rev. Mr. Hall of Ann Arbor, the Mayor, E. D. Kinne, Esq., welcomed the Society in a brief address.

On roll call thirty-seven members responded.

Dr. Foster Pratt, of Kalamazoo, offered a resolution, which was adopted, to the effect that a committee of nine should be elected by ballot to whom all resolutions concerning the Medical Department of the University should be referred without reading and without discussion. The committee elected consisted of the following: Foster Pratt, Kalamazoo; J. H. Jerome, Saginaw; S. S. Cutter, Coldwater; G. K. Johnson, Grand Rapids; Gordon Chittock, Jackson; James A. Brown, Detroit; I. S. Hamilton, Tecumseh; H. B. Baker, Lansing; J. Andrews, Paw Paw.

Pending the election of this committee the Committee on Membership submitted a report recommending to membership in the Society the names of twenty-six applicants. Among this number were four who had graduated from the Medical Department of the University of Michigan at its last commencement.

Dr. Eugene Smith, of Detroit, offered a resolution that the names of these graduates be laid on the table until after the question of homœopathy in the University had been discussed.

Dr. MacLean repudiated the insinuation of Dr. Smith that these graduates had been brought in for the purpose of aiding the Society.

Prof. Frothingham said that he would consider an objection by the Society as an outrage. He thought the Society was committed by not objecting at the meeting last May. Very likely many students would have gone to other institutions had the Society at that time objected to the course of the faculty.

Dr. Hitchcock was in favor of admitting the students this year, and did not think the faculty had attempted to rush in friends.

Regent Rynd, to promote harmony, finally moved to accept all the names except last year's graduates.

Prof. MacLean objected to the name of Dr. W. F. Breakey, of Ann Arbor, saying that he had charges to prefer showing unprofessional conduct.

By vote of the Society, however, Dr. Breakey was elected.

All the names presented were then elected except those of last year's graduates, which were referred to the committee of nine.

The Society then adjourned until 2 P. M.

AFTERNOON SESSION.

The morning trains had brought in accessions to the number in attendance, and upwards of a hundred responded to their names at roll-call.

An invitation was read from Dr. S. D. Gross, of Philadelphia, inviting the Society to unite with others in an International Medical Congress at Philadelphia during the Centennial Exposition.

A paper from Dr. A. B. Palmer, of the University, giving his views on the homeopathic question, was received and referred to the committee of nine chosen at the morning session.

Communications from Dr. Beach, of Coldwater, and from the Kalamazoo and Jackson County Medical Associations, were also referred to the same committee.

The Recording Secretary made his annual report, showing that the Society membership prior to the present meeting was 222. He also reported that charges had been made to him against a member of the Society for preparing and selling patent medicines. The report was accepted and the charges referred to the Judiciary Committee.

The Treasurer reported, showing a balance of \$273 in the treasury.

Dr. J. H. Carstens, of Detroit, presented an amendment to the constitution providing for four committees of three each, whose business it shall be to prepare a programme of scientific subjects to be announced on the morning of each day of future sessions for impromptu discussion.

A printed protest against a bill providing for a Dental and Surgical Institute in the District of Columbia, was referred to a committee consisting of Drs. Carstens, of Detroit, Wilcox, of Battle Creek, and Christian, of Wyandotte.

The reading of volunteer communications being in order, a paper on "Puerperal Fever" was read by Dr. Southworth, of Monroe. The paper was accepted and referred to the Committee on Publication.

Dr. Frothingham, of Ann Arbor, then presented a lengthy paper on "Sympathetic Ophthalmia."

Dr. Eugene Smith, of Detroit, moved that a vote of thanks be tendered Dr. Frothingham for his very able paper. Carried.

Dr. Smith then further remarked that there was but one fault to find with the paper, and that was that the paper was complete and exhaustive, and so correct in views presented that there was no opportunity for any one to add to or criticise it. He was glad to know that the Doctor's views coincided with his as to the impropriety of delaying enucleation on account of suppurative inflammatory action.

EVENING SESSION.

At the evening session the President delivered his annual address.

The address was largely historical, reviewing the vicissitudes through which the society had passed prior to its organization on its present basis.

Of the introduction of Homœopathy into the University, the address spoke as follows :

"At the last session of the Legislature, and previous to the late meeting of this Society, an act was passed and approved authorizing the Board of Regents to establish a Homœopathic medical college as a branch or department of the University, to be located at Ann Arbor, and the Treasurer of the State was directed to pay over to the Board of Regents the sum of \$6,000 annually to be used exclusively for the benefit of said department. In conformity to this law the Board of Regents have organized a homœopathic department of the University, and one course of lectures has been given. The calendar informs us that only twenty-four students matriculated in that department while in the school of regular medicine 313 were in attendance. Unless the future develops a larger annual matriculation a repeal of the law will be imperatively demanded as a too costly luxury for even its friends."

MAY 11TH—MORNING SESSION.

Charges were preferred against Dr. B. B. Ross, of East Saginaw, by Dr. J. H. Jerome, of Saginaw City, for going into consultation with non-professionals. Referred to the Judiciary Committee.

Dr. E. P. Christain, of Wyandotte, presented and read a record of fifteen cases of fetal abnormalities and deformities which had occurred in his practice.

Dr. D. C. Wade, of Holly, read a paper on "Etherization," in which he explained the use of a new instrument, invented by himself, for the administration of anaesthetics.

These were a truly valuable contributions and the appearance of the papers in the proceedings of the State Society will be awaited with much interest.

Prof. Frothingham read a communication from the Ohio State Medical Society, stating that they had elected Dr. W. W. Jones, of Toledo, as a delegate to the Michigan Society. Dr. Jones was welcomed as a delegate, and was presented to the Society by the President.

A paper on "Ocular Hygiene" was then presented by Dr. Smith, of Detroit.

Dr. Jenks, of Detroit, said that he desired especially to call the attention of all physicians to the very injurious effect of the use of soap upon infants. The use of soap in such cases was quite unnecessary and exceedingly harmful.

Dr. Maclean presented to the Society a case illustrating one of the beauties of conservative surgery. The patient had had ankylosis of the elbow joint for nine years. An operation for resection some six weeks ago had been so far successful as to enable the patient to flex the forearm at right angle with the humerus. The muscles, which from long disuse had become atrophied, were gradually resuming their normal condition.

On motion of Dr. Topping, of Dewitt, a committee, consisting of Drs. Christian, Southworth and Frothingham, was appointed to report at this meeting upon the recommendations contained in the President's address.

A resolution introduced by Dr. Jenks, of Detroit, was adopted, to the effect that the Society offer a prize of fifty dollars for the best essay by any member of the Society on such subject as a committee appointed for the purpose shall determine.

The special committee to whom was referred the petition to Congress of the Boston Society of Civil Engineers, recommending the adoption of the metrical system of weights and measures, reported that they had considered the same, and being impressed with the desirability of a uniform standard by all civilized nations, and that the metrical system has much to recommend it, presented a resolution asking the action of Congress thereon.

The committee to whom was referred the protest against a medical institute in the District of Columbia reported favorably on the protest and submitted a resolution to the effect that the Society enter a protest against the incorporation of the National Surgical Institute for the following reasons: There is nothing to prevent the gentlemen from practicing their profession

without special privileges from Congress, and they would have power to graduate men and give diplomas without restriction.

The question of the use of various anæsthetics brought out by the paper read by Dr. Wade at the morning session, was again taken up and discussed at length.

The special order of the afternoon was dispensed with and the following officers elected :

President—Abram Sager, Ann Arbor.

First Vice-President—Foster Pratt, Kalamazoo.

Second Vice-President—Eugene Smith, Detroit.

Third Vice-President—Wm. Parmenter, Vermontville.

Fourth Vice-President—G. K. Johnson, Grand Rapids.

Recording Secretary—Geo. E. Ranney, Lansing.

Corresponding Secretary—Edward Cox, Battle Creek.

Treasurer—Gordon Chittock, Jackson.

Judicial Council—Drs. Brodie, of Detroit; Southworth, of Monroe; Owen, of Ypsilanti.

The Society accepted the invitation of Dr. Cox to hold the next annual meeting at Battle Creek in May, 1877.

Foster Pratt, of Kalamazoo, as chairman of the committee of nine on medical affairs in the University, then presented a report. After giving a lengthy history of the establishment of homeœopathy in the University, the committee offered the following resolutions :

That we are not content with the existing situation of the medical department of the University, because in our opinion it is not calculated to maintain or advance medicine as a science, nor is it consistent with the honor or interest of the profession.

That a State under our form of government, cannot successfully teach, and that the medical profession ought to be its own teachers, and the guardian of its own honor.

That we regard all legislative interference with the government of the University as unconstitutional, wrong in principle and harmful in its results.

That section four of the constitution of this State society be amended so as to read as follows, viz.:

Section 4. The resident members shall be elected by a vote of a majority present at any regular meeting, their eligibility having been prev-

ously reported by the Committee on Admission; provided, that no person shall be admitted to fellowship who proposes to practice in accordance with any so-called "pathy" or sectarian school of medicine, or who has recently graduated from a medical school whose professors teach or assist in teaching those who propose to graduate in or practice irregular medicine.

The report was accepted.

A minority report was presented by Drs. Cutter, of Coldwater, and Hamilton, of Tecumseh, recommending that the last resolution be omitted. The report was also accepted.

A motion was then made by Dr. J. B. White, and supported by several, that the society do adopt the first resolution contained in the report, and on this motion an animated discussion followed.

Dr. Frothingham said he should oppose that resolution, the last clause of which implied a censure upon the faculty for retaining their places. The University authorities had not called upon the medical faculty to associate or affiliate in any way with Homœopathy, nor had it placed any restriction whatever upon discussion or interdicted in the slightest degree a dignified opposition to all medical errors. Under these circumstances, the faculty could not have resigned without disgracing themselves and casting a stigma upon medical ethics. All the Faculty had been asked or expected to do was to teach what they regarded to be true science, and to teach this to all who came to the University. One of the greatest philosophers of modern times had declared that "the only antidote for superstition is knowledge." The history of the world shows nothing plainer than that no great error was ever completely overcome, nothing more than replaced by *another* error, until the truth which was its antidote, had been discovered and disseminated. The absurd theory of Cosmos was never overthrown until by the circumnavigation of the globe, the earth was shown to be round. Neither could we expect to reform those who honestly believe in homœopathy by any method other than by showing them how patiently to interrogate nature and learn by what laws

she is governed, instead of dictating laws to her as they now do. Could the faculty refuse to teach true medical science to *any* one without violating our most sacred and ennobling principle of ethics? Could we claim exclusive right to any knowledge, even though we may have been its discoverers, if that knowledge is necessary for the prevention or relief of human suffering and diseases? Because the discoverer of the obstetric forceps kept the discovery for a long while a secret to himself, for the base purpose of giving him advantage over his rivals, his name has been handed down to us covered with infamy. If an individual secures a patent for any prescription or instrument, do we not regard him as a quack? Have we not always as a profession declared that science is the property of the whole human family, no matter who had discovered it?

We claim the right to adopt any truths demonstrated by even erroneous systems, and we have learned much in this way. Who shall deny, then, the right of those systems to drink from the fountain of wisdom they have helped us to fill?

Are we a trades-union that we shall put a patent upon knowledge calculated to reform error, and relieve human distress? Shall we, *dare* we proclaim to the world that we have secured a patent for our knowledge and skill, and say "die all ye who are deluded, we have the knowledge to save you, but it is our stock in trade and it is unlawful to reveal it except to the elect?"

Need I but drag this hideous ethical monster before you to excite your disgust? Before no civilized people can you sustain such a position as this resolution embodies; but pass it, and if you can bear the infamy I can bear your censure.

Dr. Rynd, of Adrian, opposed the resolution declaring that the University had done only what it was substantially compelled to do; that the professors had done their duty and regretted the importation of homœopathy as much as any one; that such resolutions were an insult to honorable professors and a stain on the institution; that their passage would ruin the regular medical department, and that they were uncalled for and pernicious.

The legislature should be remonstrated with, not the authorities of the University.

For many years this question had perplexed both the Regents and the faculty, who were obliged, single-handed to fight the fight, the State Medical Society persistently remaining aloof. The faculty had a right to look to the profession of the State for sympathy; they had expressed a desire for counsel; they had accepted the present relation to homœopathy as an accomplished fact and hoped for counsel from the profession to guide their future action. Instead of counsel however, they had received reproach, instead of giving advice, the society, through its committee would repudiate and disgrace the faculty. During this long struggle, the society had never sought by word or act to influence the legislature in the matter and had allowed homœopathy to get its foothold by default. Once, when the Regents were to decide whether to comply with the law of the State, demanding the admission of homœopathy, a committee appointed by the State Society to confer with the Regents "In respect to the future conduct of the Medical Department, under any contingencies necessitating a change in its organization," visited the meeting of the Regents and one of their number, Dr. Christian, of Wyandotte, had individually entered a protest against the introduction of Homœopathy into the University, he, Dr. Christian, had been then and there reproved by other members of the committee, among whom were Drs. Pratt and Hitchcock, leaders in this attack upon the University. Drs. Pratt and Hitchcock at that time declared that to prevent the introduction of Homœopathy was not the object of that committee.

Dr. Foster Pratt, of Kalamazoo, called attention to the fact that no reflection was contained in the resolutions upon the faculty of the University. The resolutions discussed facts, and did not criticise anybody but the legislature.

Dr. Rynd: "Would you have advised the resignation of the professors of medicine when homœopathy was put in?"

Dr. Pratt: "I can hardly say that I would at that time."

Dr. Hitchcock, of Kalamazoo, said that they had always considered homœopathy a humbug, and had characterized it as such. It has not changed its nature now. Heretofore it has not been dangerous because it was in the hands of uneducated persons and was under the ban. Now, however, the University takes the ban off and proposes to render it respectable by putting it upon a par with the regular profession. In his opinion it was an outrage to render it respectable and to enable the homœopathists to gull the public. The regular profession has views of its own on this question. They do not wish a humbug to be allowed or assisted in the University or by the profession. It would become dangerous if it were sent out from a learned institution. The faculty have just the same view as the profession concerning homœopathy. They now entertain the same views and yet graduate homœopathic students.

Prof. McLean, of the University, said he deprecated his association with homœopathy as deeply as any of the regular physicians. Yet he was accused of want of consistency. They can strangle homœopathy right in the University, he said, if left alone two years. He wrote to Dr. Gross when homœopathy was put in, proposing to resign his professorship, but by the advice of friends and physicians he was induced to withhold it. The situation cannot last much longer. The last session pretty much disgusted students and also professors with homœopathy at Ann Arbor. If, two years hence homœopathy had any foothold there, he would be greatly mistaken.

Dr. P. Klein, of Detroit, described the character of the society and noted the fact that the University could not be governed by this association nor did he suppose that the association could have any very direct effect through probable action upon the legislature. He had recently been a member of the House at Lansing and he knew why the act was passed. It was because other valuable appropriations for the University depended upon it. Not one member of the regular profession was there to oppose the measure. On the contrary the legislature was besieged

by the homœopaths throughout the entire session. Dr. Klein thought that the best course was to leave homœopathy alone there. Several students had already become disgusted with things and more would follow that course. He moved to indefinitely postpone the whole subject. The motion was lost by 37 ayes and 63 nays.

A motion was then made by Dr. Parmenter, of Vermontville, to divide the resolutions, so as to separate the statement from the reason which was lost by 31 to 61.

The previous question was now moved by Dr. Jerome, of Saginaw City, and was ordered. The first three resolutions were then adopted, the resolutions being taken up seriatim.

The following amendment, moved by Dr. Rynd, of Adrian, was added to resolution three :

"That a memorial be forwarded to the next legislature stating definitely the position of the State Medical Society on this question, said memorial to be prepared and duly forwarded by the committee of nine, of which Dr. Foster Pratt is chairman."

Dr. Rynd, of Adrian, moved this addition to the fourth resolution :

"And that professors engaged in the teaching of medicine at the University be ineligible to membership in this society."

The amendment was lost.

Dr. Post, of Ypsilanti, then moved that the fourth resolution be laid over for one year, as was usual in cases of amendments to the constitution.

Prof. Frothingham, of the University, said that he would not submit to such an indignity as this action involved. He would no longer, after the passage of the first resolution, remain in the society.

Indeed he could not do so consistently with his self-respect. He said he hoped the society would complete any work it had to do, and not hesitate from fear or awe as they contemplated their victim. He hoped they would not be less courageous than

the hired assassin of Coligni, who seeing the noble countenance of his victim stood half repentant, but when one of his followers cried *coward* in his ear, plunged the boar-spear into his heart.

The last resolution was then tabled for one year and it was determined that this action of the association should be forwarded to local societies and their views be learned prior to the next meeting of the society.

Adjourned until half-past nine to-morrow morning.

MAY 12TH—MORNING SESSION.

Society reassembled this morning at ten o'clock.

The committee on an International Congress reported that the subject of organizing such a Congress, including Canada and the United States, had been brought before several State societies and before the Canadian society and there was a fair prospect of eventual success. Accepted.

Dr. Foster Pratt, moved an amendment to the constitution providing that amendments to the constitution may be made only on a year's notice. Laid over for one year.

A paper was read by Dr. Parmenter, of Vermontville, upon "Forms of continued fever, as observed by him."

It was ordered that all further papers be referred to the committee on Publication without reading.

Prof. Frothingham, of the University medical department, tendered his resignation as a member of this Society in the following terms:

To the Michigan State Medical Society :

Since a resolution was adopted by this Society on the 11th inst., which, in my opinion, declares a purely commercial policy as its guide, and repudiates the ethical principle of the American medical code which makes our profession a self-sacrificing, benevolent and humane calling, and by another resolution the Society has virtually declared regular medicine unworthy a position among the sciences, and also a principle which, fully carried out, would prevent the State from a proper care of the health and lives of its citizens, would abolish public medical care of the sick and insane, also all State and other Boards of Health, and carry our civilization in this respect back to the condition of the Dark Ages, I can no longer,

consistent with my views of ethics, retain my connection with this Society, and hereby tender my resignation of membership, and ask for its immediate acceptance, or such other removal as it may please you to grant.

G. E. FROTHINGHAM, M. D.

ANN ARBOR, Mich., May 12, 1876.

The resignation was accepted.

Dr. F. M. Oakley, of York, offered the following resolution, which was adopted :

Resolved, That whenever the proper authorities shall restore the regular branch of the Medical Department to precisely the same position which it occupied before the establishment of the Homeopathic College, whenever they shall fully relieve the present medical faculty of all complicity in and responsibility for the teaching of homeopathic students, such action shall be deemed and shall constitute *ipso facto* a restoration of the Department of Medicine and Surgery to the full confidence and favor of the Society.

Dr. Parmenter, of Vermontville, tendered his resignation as a member of the Judiciary Council, and as Vice-President. Laid on the table on motion of Dr. Foster Pratt.

The resignation of Dr. Rynd, of Adrian, was tendered in the following terms :

To the President of the Michigan State Medical Association :

SIR—From the stand-point of the undersigned the action of your Association has been marked by a narrowness, bigotry and injustice disgraceful to an honorable and learned profession. Without exercising the courage to array itself directly against the University, it has become the agent of a private school to accomplish our virtual dismembership.

You do not propose any measure of relief for the state of medical affairs at Ann Arbor; you simply propose to destroy. When you cannot control an institution supported by the liberality of your people, in your own interests and for your own ends, you desire to overthrow. You have been ably assisted by members of the State Board of Health, itself the creature of the Legislature, aided and supported by all the prejudice, bigotry and disposition of a past age.

Your conduct during the session has been unfair to a respectable minority. You have tried to shut off the expression and comparison of views by the tactics of the politician; when the friends of the University honestly asked your counsel, your reply has been a notice of its disfranchisement.

Not having any sympathy with the course which you have taken; preferring personal liberty to the despotism of ideas having their origin with the

burning of witches and other humane acts of a similar nature; choosing rather to exercise my personal independence than to remain under the despotism of an association which represents nothing but itself; believing that true science is not the exclusive property of your association, and that its interests are not promoted by illiberal codes, I desire respectfully to withdraw from membership in your association.

C. RYND.

Every effort was made to prevent the reading of Dr. Rynd's resignation, but they failed. It was objected to by Dr. Jerome, of Saginaw City, on the ground that its language toward the Society was unparliamentary and improper, but President Brodie, allowed it to be read.

Then Dr. Jerome moved that Dr. Rynd be expelled from the Society. This did not meet with much favor, and Dr. Foster Pratt moved that the resignation be accepted and the letter be tabled. This was adopted.

At this point the new officers were installed and Dr. Foster Pratt, first vice-president, took the chair, Dr. Sager not being well.

It was moved and carried that all other business necessary to be transacted, as appointing committees, be referred to the President and Secretary, and the time of holding the next meeting is also to be fixed by them.

The Society then adjourned *sine die*.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

INCOMPATIBILITIES OF NITROUS ETHER.

A number of statements and suggestions, regarding an explosive effervescence in a mixture of spirit of nitrous ether and fluid extract of *uva ursi*, have appeared in the pharmacy journals of late. It has been ascertained that little or no action occurs on

mixing neutral spirit of nitrous ether with the fluid extract in question, but when having the acid reaction which the spirit always acquires by age, evolution of gas commences in a short time after the mixture is made. As to the chemical changes, it has been suggested, that "fermentation" is suddenly developed, from incipient beginnings; and again, that the ethyl nitrite, as an oxidizing agent, acts upon the "alkaline" constituents of *uva ursi*. Another writer has shown that tannic and gallic acids (both abundant in *uva ursi*), in 25 or 30 per cent. solution, will soon cause lively evolution of gas, and darkening of color, in "ordinary" spirit of nitrous ether.

For a liquid of mild taste and pleasant name, "sweet spirit of nitre" needs a good deal of looking after. We ought not to forget that nitrous acid decomposes spontaneously in liquids of ordinary temperatures; with formation of nitric acid and nitric oxide, the latter product being a most facile carrier of oxygen, versatile in disturbing chemical equilibrium. Also, the nitrites give up their bases to nearly all acids, and ethyl nitrite is so unstable that it gradually decomposes without help, even in dilute solutions. As oxidizing agents, nitrites, as soon as acidulated, liberate iodine from iodides and sulphur from sulphides; as reducing agents, they decompose permanganates and chromates. The official solvent acts as a preservative of ethyl nitrite, but with the disadvantage that as soon as the nitrite begins to decompose, it causes the formation of acetic acid from the alcohol, and acetic acid takes the base from nitrites. In this circle of changes, the action of minute quantities is soon multiplied upon large quantities. Hence the warrant for the direction to put a bit of crystalized potassium bicarbonate in the bottle, admitting a slight impurity for prevention of more serious impurities, and keeping the liquid neutral at all events. The wonder is, that our alcoholic solution of nitrous ether, often kept for considerable time and used as a vehicle for all sorts of mixtures, especially with organic galenicals, should not more frequently remind us of the explosive instability of many nitrogen compounds. It is by a

happy slight preponderance of conservative chemism that we can use such preparations as the *mistura glycyrrhizæ composita*.

Solution of potassium nitrite, with gallic acid, soon turns red and evolves nitric oxide and other gases; with tannic acid, a similar change occurs as soon as the mixture is acidulated with acetic acid, the color being brownish red and changed to dull green by alkalies.

A few years ago, there was repeated discussion as to whether carbolic acid is or is not compatible with spirit of nitrous ether. The shield had two sides. If acid to litmus paper, the spirit will sooner or later give the yellow-red color of picric acid, bitter and poisonous, its formation being suggested by the result of adding a drop of concentrated nitric acid to a drop of carbolic acid.

There has been some doubt as to whether certain of the grades of spirit of nitrous ether in market had enough of the ethyl nitrite to be very dangerous. So far as our observation has extended, there is not much of the spirit in market, that falls much below the 4 to 5 per cent. required. Last year, Mr. Griggs (1) analysed seven samples, selected from various manufacturers, as found in the retail trade, and obtained the following numbers of per cent. of ethyl nitrite: 3.7, 4.2, 4.0, 3.5, 4.4, 3.8, 4.1. A fresh prepared U. S. P. sample gave 5.4.

MISCHROSCOPIC EXAMINATION OF CONDIMENTS AND MEDICINES.

The following microscopic determinations are selected from those made by Prof. Harrington's class, in the University of Michigan, the present college year, each result being the concurrent report of a number of workers. The articles were obtained from various dealers, representing different grinders:

Ground Mustard, No. 1—pure.

- “ “ “ 2—adulterated with wheat starch.
- “ “ “ 3—adulterated with wheat starch and turmeric.
- “ “ “ 4—adulterated with wheat starch and turmeric.

(1) Contributions from the School of Pharmacy of the University of Michigan.—*Am. Jour. Phar.*, 1875, p. 463

" " " 5—adulterated with wheat starch and a very little turmeric.
 " " " 6—adulterated with wheat starch and corn starch.
 " " " 7—adulterated with wheat starch and turmeric.
 " " " 8—adulterated with corn meal.
 " " " 9—contains wheat starch and turmeric.

Ground Capsicum—contains wheat starch and turmeric.

Ground Allspice—adulterated with coffee and starch.

Black Pepper, ground, No. 1—contains wheat starch.

" " " " 2—pure.

Ground Cinnamon (true)—contains cassia.

Ground Cloves—pure.

RETENTION OF COPPER IN THE LIVER: four and a half grains of the metal remaining three months after administration ceased. (Comptes Rendus, lxxx No. 8, Amer. Chem., vi, 347.)

At La Salpetriere, Paris, an epileptic patient took, during four months, 43 grammes (664 grains) of copper ammonio sulphate. The daily dose of this compound was advanced from 10 to 15 centigrammes ($1\frac{1}{2}$ to $2\frac{1}{3}$ grains). The medicine was then discontinued, none of the epileptic cases receiving any benefit from its use. Three months after, this patient died (having tuberculous disease). After autopsy, the analysis of the liver showed that the entire organ contained copper equivalent to 0.295 grammes (4.55 grains) of the metal or 1.166 grammes (18 grains) of the sulphate.

Selections and Translations.

DIAPEDESIS OF LECOCYTES OF MAN.—ITS ANATOMOPATHOLOGICAL DEMONSTRATION. By LEON COLIN, Prof. at Val-de-Grace. Translated by W. J. HERDMAN, M. D., Demonstrator of Anatomy, University of Michigan.

Continued from May Number.

II. In a quite recent work, by M. Kelsch, upon the pathological anatomy of malarial fevers, the following passages appear:
 " My observations show that the pigment appears in the blood

at the very commencement of the attack and that it is rapidly taken up by the leucocytes in the same manner as the artificial pigment, and from this time on, the melanotic leucocytes deport themselves with regard to their dissemination throughout the organs, exactly as the globules impregnated with cinnabar ; they accumulate in the capillaries of organs where the circulation is retarded ; in the liver, which interposes a net-work of capillaries to the progress of the blood, in the marrow of the long bones and in the spleen where the capillaries open into very large veins, a condition favorable for retarding the current of blood. The most minute melanotic cells which escape from the splenic and hepatic filters are stranded in the capillary meshes of the lungs, brain, kidney, &c. In the spleen and the marrow, the accumulated pigment leaves the capillaries little by little by means of the lacunæ which afford circulatory passages and incorporate themselves in the proper tissues of these organs. It is by this procedure that the blood purges itself of the melanotic elements, exactly as it gets rid of the granules of cinnabar."

III. Finally Prof. Rouget, in his equally recent work upon the migration of the white corpuscles considers certain facts with reference to malarial pigmentation. According to time the congestions of the spleen, as a result of malarial poisoning, frequently, though not always depend upon a state of the vessels resembling that which is observed in the natatory membrane of batrachians after mechanical irritation i. e. contraction of certain vessels, stasis of the blood in others, diapedesis and capillary hemorrhages, a meeting of the extravasated red and white corpuscles, the latter becoming pigmented by absorbing the former, then by means of their amoeboid properties re-entering the circulation in the condition of pigmentary corpuscles and constituting melanæmia.

Perhaps the author was induced to enunciate this opinion by reason of his absolute conviction as to the genesis of the melanotic pigment which, according to his views, was nothing but the result of transformation of red blood corpuscles. With this ex-

ception, we fully accept the remainder and we have for a long time entertained the opinion that the spleen is above all other organs the centre for the elaboration of melanotic pigment, and that this pigment accumulates here as a result of the destruction of red blood corpuscles which takes place in malarial poisoning.

It seems to us that this learned physiologist might be much stronger in his affirmation when in making an allusion to the ultimate destiny of these pigmentary globules, he adds :

“ Future investigation may, perhaps, permit us to determine whether these pigmentary granules which have accidentally penetrated into the circulatory system are not able to get out of it, as they do in the state of white corpuscles, and permanently locate in certain tissues.

So the professor of Mountpelier admits the entrance through the walls of the vessels of leucocytes charged with pigment, but he considers it still a question whether they go out through these same walls. It seems to us that the investigation in pathological anatomy affords better proof of the escape of melanotic leucocytes from the general circulation than of their entry, but at any rate, to admit the second of these facts as a consequence of the amoeboid movements of the white corpuscles necessarily implies the admission of the first as M. Rouget among others appears to do.

CONCLUSIONS.

Malarial poisoning occasions in man a state similar to that which experimenters have sought to produce, who have injected coloring materials into the blood in order to make appreciable the extravasation of leucocytes by diapedesis. In this affection, the pigment brands the leucocytes, so to speak, and the brand remains after their passage. But if the pigmentary coloration of leucocytes renders their migration appreciable, it seems natural to admit that in other than morbid states, this migration takes place without being perceived, physiologically, in fact. In malarial poisoning, the walls of the vessels do not present any special alteration ; if we prove that these walls are traversed by leucocytes only in this affection is it that these globules are colored.

They pass through the obstruction quite as well whether the condition is normal or pathological, except they leave no trace. If their progress is noticed in *melanémie* it is because here they have left their trace when the vermillion of the experiments is replaced by pigment. In a word, the diapedesis of leucocytes is in constant progress in man, whether in health or disease, but it is only in *melanémie* that it is easily observed. This morbid condition, it may be observed proves much more than those experiments in which by an artificial inflammation of the walls of the vessels local migrations of leucocytes are obtained, migration sufficiently abundant to constitute prevalent perivascular collections. In *melanémie*, it is not a local and morbid extravasation that takes place as in these experiments. The phenomena are much more general and much more physiological since the proofs of it are discovered, not only around the capillaries but in and around the walls of the small arteries and veins and without previous inflammation of these structures.

The communication of the solid elements of the blood with the tissues is then not only much more intimate, but much more general than is usually admitted. It is probable that the migration would be much more active as the febrile heat increased the vascular tension. The impulsion of the blood current would contribute to this increased activity as well as the amœboid movements of the leucocytes and these movements are much more energetic as the temperature of the liquid which bathes them is raised.

This explains to us how it is that in countries where malaria is prevalent, it is common to see among those attacked by the fever the rapid appearance of the yellow tint which is one of the first indications of the telluric poisoning and of the general pigmentation of the tissues.

We have seen the sick present this tint after two or three attacks of the fever, only sometimes after a single one; to the red color of the integuments coinciding with the period of febrile reaction, succeeds in several hours, at the moment of apyrexia

their pigmentary coloration, indicating according to our view, an abundant extravasation around the peripheral capillaries, of leucocytes charged with melanotic granules.

In every pyrexia other than the malarial, the same as in all maladies attended with febrile reaction as pneumonia, acute articular rheumatism, scarlatina, &c., there will be, according to our view, an abundant extravasation of leucocytes, but leucocytes not colored, normal white corpuscles, and in the train of the febrile orgasm a pallor of the integument will replace the more or less red tint. These are not simple hypotheses. It is well known that in certain febrile affections where the leucocytes have not undergone pigmentation, their migration is not only a demonstrated fact, but even one of the conditions of the morbid process. In ordinary variola, the work of the formation of pustules is instituted by the congestion of the papillary structure of the skin the papillæ of which elongate and the vessels permit the leucocytes to be extravasated. These leucocytes constitute a notable proportion of the contents of the alveolar spaces which are hollowed out in the midst of the capillary net-work of the malpighian bodies; proof of this fact may be found in the modern works of Auspitz, Busch, Courvil, and works confirmed before the academy of medicine, by M. Vulpian. Moreover the part these globules take in the further progress of inflammations is known by the constitution of the variola pustules. If we enlarge thus the field of conclusions to which the study of malarial melanemie primarily brought us, we believe we do not exaggerate the import of certain facts of which these conclusions seem to us to be entirely logical deductions. Analogous anatomical results should be obtained in the train of laboratory experiments. We think that inferences quite as formal and quite as general will be derived from them; we dare hope that the *savants* who have inaugurated with so much lustre the experimental teaching of medicine will find these data of the human clinique quite as convincing as the experiments in comparative pathology.

RADICAL CURE FOR PILES.

Dr. A. B. Bowen, writes in a recent number of *The Record*: “ My attention was directed to the treatment for nævus by hypodermic injection. From the similarity of the anatomical structure of nævus to haemorrhoidal tumours, I was induced to try the remedy. In the latter I used carbolic acid and ergot (fl. ext.) in equal parts, injecting from ten to fifteen minims of the solution into the spongy, vascular haemorrhoidal tumour. This was repeated about once a week for five or six times, when the tumour had entirely disappeared. I have tried this in several cases, and it acts like a specific.”

IODOFORM FOR SORE NIPPLES.

Nothing we have ever tried for the cure of sore nipples ~~has~~ done so much good as the following ointment:—℞ Iodoform ~~zss-j~~ ; Lard, Simple Cerate, aa ~~zij~~.—M. Apply it as often as the child is taken from the breast. Before suckling, wash ~~the~~ nipples thoroughly with soap and water. Great improvement may be expected in twelve hours from the time of the first application. The iodoform fills the house with its unpleasant ~~odor~~, but, as one of our patients remarked the other day, “ that is nothing when compared with the sweet relief the medicine ~~affords~~.”—*W. Va. Med. Student.*

The following has been used effectually as a substitute for ergot in flooding:

℞ Quiniæ Sulph.	grs. viij.
Acid. Sulph. Aromat.	ʒvj.
Tinct. Cimicifugæ	ʒvj.
Tinct. Cinnamomi, qs. ad.	ʒvj. M.

Sig.—A teaspoonful every hour.

ON THE USE OF QUININE AS A GARGLE IN DIPHTHERITIC, SCARLATINAL, AND OTHER FORMS OF SORE THROAT. By DR. DAVID J. BRAKENRIDGE.

Since Binz published his famous experiments, showing the action of quinine on the white corpuscles of the blood, numerous authorities have confirmed and extended his observations. The following facts, among others, may now be regarded as established:—

1. Quinine is a protoplasm poison, and limits the number and movements of the white blood corpuscles and pus cells.
2. It prevents the pathological migration of the blood corpuscles into the tissues of the membranous and parenchymatous organs exposed to the air, both when it is given subcutaneously and when it is directly applied to the part.
3. It restrains the dilatation of the blood vessels.
4. It is an antiseptic, and exerts a paralysing, or, in larger doses, a destructive influence on microzymes.

With these facts in view, the theoretical appropriateness of quinine as a gargle in diphtheria with abundant proliferation of micrococci, and in scarlatinal, and various other forms of sore-throat, especially when attended with membranous exudation, pultaceous secretion, or ulceration, is apparent. For it antagonises all the visible factors of such forms of inflammation.

Before employing it for this purpose, I was familiar with the use of solution of quinine as a dressing in bed-sores and other tedious ulcers. The marked diminution in the secretion of pus and the rapid improvement which I observed to take place in these cases when so treated, first led me to anticipate good results from quinine as a gargle.

For the last four months I have treated every suitable case of sore-throat that I have met with in my wards in the Royal Infirmary and elsewhere, with a gargle composed, as a rule, of two grains of sulphate of quinine and five minims of dilute sulphuric acid to each ounce of water. Sometimes I have been able to increase the strength; sometimes I have been compelled to diminish it. When tolerated, the stronger it is the better.

The results I have obtained fully confirm my favorable anticipations. From a considerable number of cases I draw the following conclusions:—

Simple non-syphilitic ulcers of the throat, under this treatment, at once assume a healthier aspect and heal rapidly.

In syphilitic ulcers, the local treatment has always been accompanied by the internal administration of iodide of potassium, or some other suitable constitutional remedy; but my impression is that, in these cases, the cure is hastened by the quinine gargle.

Its effect in the sore-throat of scarlatina is very marked, the pultaceous secretion being checked, and the inflammatory swelling diminished.

It is of comparatively little use in the early stage of cynanche tonsillaris, over which tincture of aconite in minim doses frequently repeated, has so decided a control. When, however, abscess followed by abundant discharge of pus results, its beneficial influence in checking the suppuration and promoting healing is marked.

In the slighter forms of diphtheritic sore-throat it answers admirably, preventing the extension of the disease, and promoting the separation of the membranous exudation.

It is, however, in severe cases of true diphtheria that I hope it will prove most useful. I have now employed it in three cases of this disease, and in all the result has been highly satisfactory.

Dr. Brakenridge then gives the history of a typical case of diphtheria, which he describes as one of "*unusual severity*," and in which this mode of treatment was adopted after having tried chlorate of potash and tincture of the perchloride of iron internally and Condy's fluid as a gargle without any perceptible improvement to the patient. His formula was as follows:—

R. Quiniæ sulphat, gr. xviii. ; acid. sulphur. dilut. m xlii. ; aquæ ad ȝ vi M.

This prescription was alternated every half hour with Condy's fluid, and the patient afterwards did well and made a complete

recovery from the primary disease by the 13th day after the first attack.

I have found the quinine solution useful as a wash in aphthæ, stomatitis, and other affections of the mouth; but my experience of it in these cases has been limited by the difficulty attending its use in childhood, owing to its very bitter taste.—*Practitioner.*

*TREATMENT OF CARBUNCULAR DISEASE IN MAN BY
THE SUBCUTANEOUS INJECTION OF ANTI-VIRULENT
FLUIDS. By DR. L. A. RAIMBERT. (Gaz. Hebdom. No. 25 et 26,
1875.—Rundschau, Dec., 1875.)*

Raimbert tried the subcutaneous injection of carbolic acid (1 part to 50) in two cases of carbuncle, after other means had failed, and in one case the hypodermic injection of iodine (1 part to 500), in all three cases with favorable results. In the first case, he was consulted on account of a malignant œdema of the face by a farmer who, a week before, had lost a good many sheep with a fatal inflammation of the spleen (milzbrand). The disease first appeared as a number of small pustules behind the right ear, to which was soon added a considerable infiltration of the cheeks, lips and structures beneath the jaw. On the third day, the white-hot iron was applied around the diseased part, a distance from it of from four to six centimetres, and the surface of the scabs was sprinkled with corrosive sublimate. On the following day, as soon as the swelling had diminished, Raimbert injected ten or twelve Pranz's syringe fuls of a two per cent. solution of carbolic acid into the whole extent of the cheek, from the temple to the submaxillary space. The result was astonishing; the injections were repeated on the following day; the scab came off on the 18th day, and the healing progressed uninterruptedly.

The second very interesting case was the person of a farmer who, in opening a vein in a cow suffering from gangrenous inflammation of the spleen, had, in doing so, inflicted a slight abrasion of the skin on the left ring finger. Three days after-

wards, he noticed at the point of abrasion a small papilla depressed in the centre, which, the physician he consulted declared was malignant pustule, and cauterized it with caustic potash. On the following day, there was considerable increase in extent and severity, and the swelling had been decidedly augmented by the caustic. The swelling rapidly extended to the whole arm, which became so hard and tense that it was necessary to make a number of incisions in both the arm and the forearm to lessen the tension. On the fourth day Raimbert saw the patient, and mindful of the result in his former case, he injected nearly forty syringefuls of carbolic acid solution, of the same strength as formerly, in the whole length of his arm. The result was "*bri-liant*." As early as the next day the arm was less hard; and the injections were repeated on this day morning and evening. From that time the improvement progressed slowly but steadily; so that, at the end of two months after the gangrenous parts of the ring finger, a part of the back of the hand, and also some parts which had become gangrenous at the seat of puncture, had been cast off, all the wounds were found to be well healed over.

In a third case, where the wife of a tradesman had been handling hides, the affection began as a small knot on the right cheek, the connective tissue around which had become infiltrated for a considerable distance, and from which a red band of lymph vessels ran directly to an enlarged gland behind the jaw. After removing the skin at the centre, the wound thus made was treated with corrosive sublimate. The swelling had greatly increased on the following day, and was progressing towards the neck and eyelids; that evening $4\frac{1}{2}$ syringefuls of a solution of iodine (1 part to 500) were injected under the skin of the cheek and lower jaw. On the following day no change having occurred in the swelling, the injection was repeated, and on the next day there was a manifest diminution in the size of the affected part. On repeating the injection, the improvement was marked, and steadily increased, although on the seventh day of the disease the patient gave birth to a seven months' child. The

patient lost then and on the following day a considerable amount of blood, and the hemorrhages only ceased on the third day after her delivery.—*Virginia Medical Monthly.*

LOCAL APPLICATION OF CHLORAL HYDRATE IN PRURITUS VULVÆ.—In *La Tribune Medicale* for December 19, 1875, a very interesting case of pruritus of the vulva is reported, which was treated by the local application of chloral hydrate. The patient, a young lady, whose age is not stated, had suffered for years from violent attacks of hysteria. Her menstrual flow had ceased, but each time when it should appear, she suffered from a sanguinolent salivation. On inquiry, Dr. Gelle, who reports the case, learned that she had suffered for some time from pruritus of the vulva, which was so severe as to necessitate her rising several times during the night to bathe in cool water. Dr. G., believing that the suppression of the menses (in the normal manner, at least) was due to the cold bathing, to which the young lady was obliged to resort, addressed his treatment directly to the pruritus of the vulva. He had recourse to chloral; a solution of ten grammes of chloral hydrate in one thousand grammes of water being employed as a wash several times a day. Besides this, tampon of wadding soaked in the mixture was placed between the labia. Under the influence of this treatment, so simple and so strictly local, the itching immediately became less, and gradually became so slight as to permit sound and continued rest. In the course of five days, the pruritus had entirely disappeared.—(*Va. Med. Monthly.*)

BACTERIA AND SEPTICÆMIA.

In an elaborate experimental paper (*New York Medical Record*), Dr. T. E. Satterwaite arrives at the following conclusions:

1. Bacteria are certain vegetable organism which belong probably to the algæ; they are found abundantly in nature, but chiefly where there is moisture.

2. They exist in the body in health, covering the mucous membranes from the mouth to the anus, and sometimes appear to penetrate a certain distance into the system, without causing symptoms of disease.
3. They also exist in putrefying fluids, and in various disease-processes, occurring in hot and cold abscesses, in the blebs of erysipelas, and in simple blisters.
4. It is doubtful whether the virulent principle of infective diseases is albuminous.
5. This principle does not reside in the perfectly clear fluid that passes through porous clay. In putrid infectious fluids this appears to be certain. The poison is rendered less virulent by repeated filtrations through common filter-paper.
6. The virulent principle may be boiled for hours, filtered numbers of times in the ordinary way, boiled with alcohol, and again filtered and dried, and yet the watery extract of such a dry residue will produce septic symptoms. It is therefore soluble, or at least suspended in water.
7. The liquid which is thus poisonous may be clear to the eye, but contains granules under the microscope.
8. These granules have not produced bacteria in a number of instances when they were placed in a suitable condition to do so.
9. We cannot, therefore, feel that satisfactory evidence has been brought to show that, in any of the diseases or processes enumerated, minute organisms are the sole and sufficient cause of disease.—*Medical Times, Phila.*

WARBURG'S TINCTURE.

This anti-pyretic remedy, which has attained much celebrity, and the composition of which was kept secret, has just been made public, in a paper by Prof. Maclean, of the Netley Medical School, published in the *Medical Times and Gazette*, of Nov. 13, 1875.

“It will be seen,” says Prof. Maclean, “that quinine is the

most important ingredient in the formula, each ounce bottle containing nine grains and a half of the alkaloid. Its presence has been detected by every chemist who has attempted its analysis, and never doubted by any medical man of experience who has used the tincture. Many will say 'after all, this vaunted remedy is only quinine concealed in a farrago of inert substances for purposes of mystification.' To this objection my answer is: I have treated remittent fevers of every degree of severity, contracted in the jungles of the Deccan and Mysore, at the base of mountain ranges in India, on the Coromandel coast, in the pestilential highlands of the Northern Division of the Madras Presidency, on the malarial rivers of China, and in men brought to the Netley Hospital from the swamps of the Gold Coast, and I affirm that I have never seen quinine, when given alone, act in the manner characteristic of this tincture. And, although I yield to no one in my high opinion of the inestimable value of quinine, I have never seen a single dose of it given alone, to the extent of nine grains and a half, suffice to arrest an exacerbation of remittent fever, much less prevent its recurrence; while nothing is more common than to see the same quantity of the alkaloid in Warburg's tincture bring about both results."

The following is the formula for its preparation :

R Aloes (Socotr.) libram ; rad. rhei (East India) ; sem. angelicæ;* confect. fect. democratis; ana uncias quatuor.

Rad. helenii (s. enulæ); croci sativi; sem. fœnicul.;† cret. præparat.; ana uncias duas.

Rad. gentianæ; rad. zedoaricæ; pip. cubeb., myrrh. elect.; camphor; †bolet. laricis; ana unciam.

The above ingredients are to be digested with 500 oz. proof

* This confection, which consists of an immense variety of aromatic substances, was once officinal, and is to be found in the London Pharmacopœia, 1746.

† Dr. Warburg informs me that this ingredient was added to correct the otherwise extremely acid taste of the Tincture. Many other substances were tried, but none answered so well as prepared chalk.

‡ This is the *Polyporus Laricis* (*P. officinalis*, *Boletus purgans* or *Larch Agario*); "formerly," says Pereira, "used as a drastic purgative, and still kept by the herbalist."

spirits in a water-bath for twelve hours; then expressed, and added ten ounces of disulphate of quinine; the mixture to be replaced into the water-bath till all quinine be dissolved. The liquor, when cool, is to be filtered, and is then fit for use.

The mode of administering it is as follows:

“One half ounce (half a bottle) is given alone, without dilution, after the bowels have been evacuated by any convenient purgative, all drink being withheld. In three hours the other half of the bottle is administered in the same way. Soon afterwards, particularly in hot climates, profuse, but seldom exhausting perspiration is produced. This has a strong aromatic odor, which I have often detected about the patient and his room on the following day. With this there is a rapid decline of temperature, immediate abatement of frontal headache—in a word, complete defervescence—and it seldom happens that a second bottle is required; if so, the dose must be repeated as above. In very adynamic cases, if the sweating threatens to prove exhausting, nourishment in the shape of beef-tea, with the addition Liebig’s extract, and some wine or brandy of good quality, may be required.”

COLLODION FOR USE IN FRECKLES.

(*Bulletin General de Therapeutique*, October 30th, 1875).—A solution of corrosive sublimate either pure or mixed with cyanide of mercury is commonly employed for the removal of freckles; but a collodion containing ten per cent. of its weight of sulpho-carbolate of zinc has given excellent results without being accompanied by any of the dangers attending the use of the mercurial solution.

The following formula is an excellent one:

Sulpho-carbolate of zinc.....	.....1 part.
Collodion.....	.....45 parts.
Oil of lemon .....	.....1 part;
Absolute alcohol.....	.....5 parts.

The sulpho-carbolate of zinc should be reduced to an extremely fine powder, and should then be thoroughly incorporated with the fluid mixture.—*Phil. Times*, Jan. 8, '76.

LECTURE By PROFESSOR G. SIMON, of Heidelberg, on the Methods of Rendering the Female Bladder Accessible, and on the Catheterization of the Ureters.

In order to remove calculi and other foreign bodies from the bladder, resort has been had to various operations—bloodless dilatation and section of the urethra, vesico-vaginal, and vestibular section, and the high operation.

Of these methods, only two are recommended for the facility with which they permit, not only foreign bodies to be removed, but diseases to be diagnosticated and treated.

Dilatation may be accomplished gradually, or at once, in a few minutes. The rapid mode is preferable, because the long retention of a bougie is apt to produce inflammation and swelling of the urethra.

The observation that the urethra admitted of dilatation was very early made. Wildt, who describes my procedure, in the "*Archiv fur Klinische Chirurgie*," gives many citations. I will refer in addition to Franco (*Traite des Hernies*, 1861), Fabricius Hildanus, Peter Dionys and Bertrandi. Sir A. Cooper five times removed calculi through dilated urethræ. Hybord (1872) describes the process of dilatation, and declares the introduction of an instrument greater than 3 or 4 Ctm. in circumference impossible. Christopher Heath's plan was to first introduce his little finger, afterwards his index finger, giving it a rotary motion.

Notwithstanding these observations dilatation did not become popular, because of the limited indications, and fear of the resulting incontinence. My method, developed through a long series of experiments, has, I believe, dispelled these objections.

The orifice is the narrowest and most unyielding part of the urethra, and it is seldom that the finger can be introduced without using great force. I generally make two incisions in the upper margin of the orifice 1-4 Ctm. deep, and one below 1-2 Ctm. deep. The finger being thicker at its base unless these incisions are made, will lack at least 1 Ctm. of penetrating its en-

ire length. The incisions are best made with a pair of scissors. No harm can come of this slight operation. Few muscular fibres are divided, the little muscles heal, and in the future they obviate the use of chloroform.

For dilating I use seven sizes of hard rubber bougies, the largest being 2 Ctm. in diameter, the smallest $\frac{3}{4}$ Ctm. After using these I introduce my index finger without difficulty, taking care, at the same time, to introduce my middle finger into the vaginal; for in this way the bladder may be more deeply penetrated, the urethro-vesical septum pressing the commissure of the finger. I also press, with my other hand, upon the base of the bladder.

The fear of incontinence has interfered to such an extent with bloodless dilation, that Hybord, (1872) after careful research, only found twelve cases where the operation had been performed for the extraction of stone. Knowing this, I set to work to discover how far dilation might safely be carried. Hybord and Spiegelberg are the only authors who have given definite estimates. No practical benefit can be derived from their statements, because they differ so widely. Hybord says it is unsafe to dilate beyond 3-4 Ctm. circumference, 1-1.3 diameter; Spiegelberg says 2.5 Ctm. diameter, = 7.8 Ctm. circumference, and even beyond this. The bounds prescribed by Hybord are absurd, for even a child's finger is 3 or 4 Ctm. in circumference. My numerous observations have taught me that bougies 1.9-2 Ctm. diameter, = 6-6.3 Ctm. circumference, may be used without any disaster worthy of mention. Slight ruptures of the mucous membrane may result, but these heal in a few days. Authors who have mentioned the removal of calculi have invariably neglected to state whether incontinence resulted or not. I have arrived at the conclusion that in girls from 11 to 14 years old the urethra may be dilated 4.7-5.6 Ctm. circumference, = 1.5-1.8 Ctm. diameter; from 15 to 20 years, from 5.6-6.3 = 1.8-2 Ctm. diameter, and that in only exceptional cases. The objects to be attained by dilation are :

(1.) The diagnosis of diseases of the mucous membrane of bladder by palpation. Illumination of the interior of the

der with the calcium light becomes of practical importance, for the finger having determined the site of the disease, the light can be intelligently directed.

(2.) Very small stones may be felt and removed. Heath sought in vain with instruments for a stone which he easily found and removed with his finger.

(3.) Formerly calculi were sought to be grasped without the guidance of the finger. Now the instrument may be introduced along with the finger. Lithotripsy will be more available, and the dangerous operation of urethotomy will fall into disuse.

(4.) Caustic applications may be made in obstinate cases of chronic vesical catarrh.

(5.) For the cure of fissures of the urethra. Heath adopted with good results, the plan of dilation with cauterization. Spiegelberg pursued the same course. I cannot say that I have been uniformly successful.

(6.) The diagnosis of vesico-vaginal fistula in closed vagina. Wildt mentions a case in which by palpation I pronounced a vesico vaginal fistula curable, opened up the artificially closed vagina, and cured the fistula by bringing its margins together. I have since treated a second case of the kind with good results.

(7.) The diagnosis of the location and extent of tumors, and swellings between the bladder and vagina. In the numerous cases of carcinoma of the uterus in which the vesico vaginal septum is implicated, it is important to know whether the mucous membrane of the bladder is involved, for, unless this is intact, the tumor cannot be removed without opening the bladder.

(8.) The extirpation of tumors, especially of papillomata in the walls of the bladder.

(9.) Renal calculi which happen to be arrested near the orifices of the ureters may be diagnosticated and removed, either by incising the orifice of the ureter or by making an incision through the mucous membrane of the bladder.

(10.) The opening of an Hæmatometra, whose evacuation between the bladder and rectum is impossible or too dangerous, on account of the congenital absence of the whole or a part of the vagina. In such cases Scanzoni evacuates the collected menstrual blood through the rectum. The peritoneum is invariably wounded by long incisions, and openings by trocars close, and relapse occurs. If opened through the bladder the peritoneum is unharmee. Noggerath's trocar is very useful for the purpose.

(11.) The cure of the painful and otherwise ultimately fatal vesico-intestinal fistulæ of large and small intestines. A fistula is easily found by the finger passed through the dilated urethra, and caustic applications made, guided by the finger or endoscopic illumination. (Translated from Volkmann's Sammlung Klinischer Vortrage, for the *St. Louis Medical and Surgical Journal*.)

MEDICATED ICE IN SCARLATINA.

In a short communication to the *Lancet* (Jan. 8, 1876), Mr. Edward Martin says: "Every practitioner has at times to face the difficulties of the scarlatinal throat in young children. It may sadly want topical medication; but how is he to apply it? Young children cannot gargle, and to attempt the brush or the spray often fills them with terror. In many cases neither sternness nor coaxing avails. If the doctor thinks it his duty at all hazards not to leave the throat untouched, the child is subjected to a struggle and a fright which probably render the proceeding more productive of harm than good. If, on the other and more wiser side, he, when persuasion fails, goes no further, he is haunted by the feeling of not having done all that might have been done for the case. Most of us at times have been impaled on the horns of this dilemma. Yet these little ones in almost every case will greedily suck bits of ice, as I doubt not most of your readers can testify. This has long been my chief resource where I could not persuade the child to submit to the sulphurous acid spray. Lately I have been trying an ice formed of a frozen solution of the acid (or some other antiseptic), and I think my professional brethren will find it a valuable addition to their means. Though, of course not so tasteless as pure ice, the flavor is so much lessened by the low temperature, and probably also through the parched tongue very little appreciating any flavor whatever, that I find scarcely any complaint on that score from the little sufferers; they generally take to it very readily. The process of making it is so simple that a few directions to any intelligent nurse will quite suffice; or in urban practice the chemist who dispenses the other prescriptions will undertake this one also. A large test-tube immersed in a mixture of pounded ice and salt is the only apparatus required, and in this the solution is easily frozen. When quite solid, a momentary dip of the tube in hot water enables one to turn out the cylinder of ice as the cook turns out her mould of jelly. I have tried the three following formulæ, all of which answer, though I think I prefer the first:

" 1. Sulphurous acid, half a drachm; water, seven drachms and a half: mix and freeze.

" 2. Chlorate of potass, one scruple; water, one ounce: dissolve and freeze.

" 3. Solution of chlorinated soda, half a drachm; water one ounce; mix and freeze.

" However, the form is of secondary importance, and each practitioner can construct his own. Boracic acid, salicylic acid—or any other harmless antiseptic with not too much taste, would, doubtless, be as useful as those I have indicated. It is the idea of applying them in the shape of 'medicated ice' that I recommend to the profession, with the belief that it is of practical value."—*Monthly Abstract Med. Science.*

Ophthalmology and Otology.

MYRINGITIS.—A Clinical Lecture by Prof. Joseph Gruber, of the Imperial University, Vienna. (Allg. Wien. Med. Ztg.) Translated from the German by A. G. Sinclair, M. D., Ophthalmic and Aural Surgeon to Harper Hospital, Detroit.

Among the cases which I have exhibited to you in this clinic you have rarely seen a normal membrana tympani. In nearly all, and as you are aware our clinical material is very great, the drum membrane was found to have undergone changes attributable either to an antecedent or still progressive attack of inflammation. We are, therefore, justified in classing inflammation of this membrane with the most common forms of aural disease. If, however, we limit the term to those cases in which the inflammation is confined to the drum membrane, we must admit that as a primary, idiopathic disease, myringitis is of very rare occurrence, so rare, indeed, that many of the older aurists denied its existence. If one read carefully the writings of those who entertained the opposite opinion, he will readily perceive that these authors classed other and very different forms of disease under this head.

The first aurist who diagnosticated and in a measure correctly described this disease, was Kramer of Berlin. The picture which he presented cannot, however, be accepted as true in the light which more recent investigations have thrown upon the nature of this disease. Indeed he is placed in a peculiar light as an observer when we find in his clinical reports the statement that a few days are sufficient for the healing of a perforation the size of a pea "in the antero-inferior segment," resulting from such inflammation. When we know how slowly such extensive perforations heal, usually requiring months for complete recovery, we must, however unwillingly, believe that many cases

which Kramer classed as myringitis would have been placed in a different category by more thorough investigation.

Myringitis occurs in connection with otitis externa, especially that form of it which, after v. Troeltsch, I have described to you as otitis externa diffusa. Here the drum membrane is involved from the very beginning of the disease. It also arises in the various forms of inflammation of the lining membrane of the tympanic cavity, especially in connection with otitis media suppurativa. As a sequel it frequently follows otitis externa circumscripta, and inflammatory action in various other portions of the ear.

The subjective symptoms are the same in the primary and consecutive forms of the disease. With regard to the objective symptoms, however, this is not the case, and with the methods of investigation at our command at the present day, we are enabled to diagnosticate primary myringitis with perfect certainty and to define its course.

Among the causes of inflammation of the drum membrane are the following: Wounds, irritation from any cause, and cold. Wounds of the memb. tymp. often heal by first intention, giving rise to no inflammatory action worthy of note. Frequently, however, they result in inflammation which may either be circumscribed, or involve the entire membrane.

Such lesions may be very various in their nature: excoriations, penetrating, and incised, wounds with various complications, and according to the nature of which will be the severity of the resulting inflammatory reaction. In many cases even the most trifling injury, as for example, a slight abrasion caused by the introduction of a hair pin, or tooth pick into the external auditory canal, gives rise to inflammation in its most violent form. It has also been observed that perfectly normal drum membranes are much more likely to be attacked by inflammation after injuries than such as are opaque, cicatricial, or otherwise degenerated. The number of cases of myringitis arising from exposure to cold is much greater than those of traumatic ori-

gin. The introduction of cold substances into the ear is a common cause; plunging beneath the surface in the cold bath, also the cold water of the douche finding its way into the ear after the use of the steam bath. It is also likely to follow the removal of masses of cerumen which have long excluded the drum membrane from contact with the air. In cases also in which the drum membrane has become hyperaemic through obstructed circulation arising from the plugging of the ears with cotton or charpie inflammation is very readily excited.

Exposure to currents of air is also a very frequent cause. The introduction of foreign substances into the ear, either accidentally or by design, many give rise to myringitis. In this country for example, the people resort to the placing of such remedies as camphor, French brandy, chloroform, ether, garlic, portions of onion, etc., in the external auditory canal for the relief of toothache, and either by the irritation which they produce, or through the unskillful efforts made to remove them, inflammatory action is excited, which is very prone to attack the drum membrane. I have also repeatedly met with it as the result of the use of various proprietary remedies for earache, especially one advertised by a local apothecary under the high sounding name of "Acousticon." By means of the microscope it has been found that fungous growths of various forms give rise to myringitis. Wreden of St. Petersburg has rendered invaluable services to science by his investigations and discoveries in this direction. The older surgeons, particularly Saissy, believed that irritation in the vicinity of the ear, from the use of blisters, irritating salves, etc., would produce the disease. I cannot, from my own experience, confirm this opinion. Yet I have frequently observed artificial eczema not only upon the auricle, but also in the external auditory canal, as the result of the use of remedies of this class in cases in which the skin is very sensitive.

Among the subjective symptoms of primary acute myringitis pain is the most prominent. In some instances, however, this is only present early in the course of the disease. The pain is

drawing, tearing, or lancinating in character, and is usually marked by a degree of severity, which on account of the small size of the membrane can only be explained by the richness of its nerve supply.

Great febrile disturbance frequently follows the attack and may even occur with the onset of the disease. In plethoric individuals, delirium may occur, and children are frequently seized with attacks of vomiting, and convulsions. In short, during an attack of primary inflammation of the drum membrane symptoms may occur of so serious a character as to lead to the belief that grave cerebral complications are present.

If we compare these symptoms with those which manifest themselves during the earlier stages of meningitis we must admit that myringitis may readily be confounded with meningitis, especially in the case of children; and it will also become apparent why the older aurists so generally believed aural discharges to be connected with cerebral affections, an error which would have been avoided had they possessed the means of investigation at our disposal to-day.

In affections of the auditory nerve symptoms present which are identical with some of those attending otitis externa: diminished hearing, and noises variable in kind and duration. These are to be explained similarly with those occurring in otitis, and are due to a hyperæmic condition of the membrana tympani, which is followed by exudation and various other changes which diminish the conducting power of the drum-membrane. When fever occurs the sensibility of the auditory nerve is lessened and thus the difficulty in hearing still further increased.

(To be Continued.)

INTERNATIONAL CONGRESS OF OPHTHALMOLOGY.—This congress will be formally opened on Tuesday September 12, 1876, at Chickering Hall, Fifth avenue, New York. Drs. C. R. Agnew, Henry D. Noyes, and D. B. St. John Roosa, of New York, constitute the preliminary committee of arrangements.

Inasmuch as a large proportion of the scientific work will

naturally fall upon the American members of this congress, it is to be hoped that, in this respect, no effort will be spared to make this occasion one that shall redound to the credit of American Ophthalmologists.

Ars, ante omnia veritas.

Editorial.

THE MICHIGAN STATE MEDICAL SOCIETY AND THE UNIVERSITY.

The action of the State Medical Society at its last meeting, on the homœopathy question at the University was a painful surprise to the friends of legitimate medicine everywhere, and particularly such to those interested in the welfare of the great State institution whose interests this action was designed to affect. It was thought by those, that having experienced the agitation incident to a somewhat acrimonious discussion during the past twelve months, a spirit of fairness, candor and equity, and an honest desire to counsel one with another as to the best means of dealing with the inevitable question, would characterize the members of the State Society when they should meet in annual convention. The Society had it in its power to pour oil upon troubled waters of medical politics in Michigan, to devise some plan whereby conflicting parties actuated by unselfish motives might be harmonized, and good feeling among the profession preserved intact. But so far from doing, or manifesting any disposition to do, aught of this nature it has deliberately added violence to the disturbing elements, and has inaugurated a condition of affairs in this State whose end it is impossible now to discern. In our May number we made a request that no fair-minded person could refuse, that should the Society, peradventure, see fit not to endorse the position accepted by the faculty, that it submit a less objectionable plan of dealing with homœopathy. This re-

quest, made on behalf not only of the faculty but of a large number of the profession, has been unheeded. The Society, while repudiating the existing relations has made no attempt to deal with the question, and true to its conduct in the past, has thrown the responsibility back on the faculty without a word of counsel or advice. It has pulled down and manifests no desire to build up, and has by its action brought down upon the profession of regular medicine the scorn, derision and condemnation of the people and the united secular press of the State.

The faculty has all along held itself amenable to the profession, and regarded, as it should, the State Society as the legitimate exponent of professional sentiment in the State. That it should now repudiate the authority of the Society is a question of duty. The Society has by its action divested itself of its right to speak for the profession. If it refuses to advise it has no longer any authority to censure. It cannot consistently condemn views held by a large, and perhaps the greater portion of the profession of the State, if it refuses to accede to the request for counsel.

Had the Society manifested the least desire to deal with the question, we should for the sake of peace and harmony in the ranks, have gladly recognized and considered any plan of action it might have proposed; but as the matter now stands we cannot be true to our own sense of duty without denouncing its conduct as unfortunate, bigoted, narrow-minded and unworthy the great profession which has always justly boasted its liberality. To suppose, however, that the late action of the Society was representative of the profession of the State would be doing not only the profession but the Society itself an injustice. It needed but the most cursory glance at the meeting to convince any one at all conversant with medical matters and men in the State that the University had little to hope for a fair and candid hearing and judgment. The most heterogeneous elements, differing at all other points, met and found common ground in an intense hatred from a variety of causes, of the Medical Department. The animus of these parties was manifested in the action of the

committee going out of its way by leaving the question committed to its consideration to introduce a resolution, striking at the very organization of the Medical Department, declaring that it is derogatory to the honor and dignity of medicine for it to be taught by the State. It may also have been a mere coincidence, but a most remarkable one certainly, that not only the committee itself, but also the officers of the Society were selected with but two or three exceptions from among those who had made themselves conspicuous by their rabid opposition to the University—this opposition on the part of many dating from many years prior to the introduction of homœopathy. Members, too, who for many years have been known as chronic office seekers, were at the late meeting elevated into power on the sole recommendation of their being inimical to the University.

In the resolution declaring that medicine should not be taught by the State was embodied the spirit which originated and kept alive the disturbance of the last year. A private institution which arrogates to itself the position of a rival to the Medical Department of the University, was for very obvious reasons very much interested not only in having this resolution received as the sense of the Society, but also in having the meeting do all that it did, to weaken the confidence of the profession in the Medical Department. This institution was largely represented in the meeting by its professors and lecturers who cast a solid affirmative vote on every question, however remotely antagonistic to the welfare of the University. In addition to this body of voters there were present two other classes, not less bitter in their opposition, though animated by different motives. One of these was composed of disappointed applicants for positions in the Medical Department,—some of them applicants too since the present relations to homœopathy were instituted. The other class consisted of the advocates and supporters of a contemplated university to which it is proposed to affix a medical department. We are credibly informed that overtures have been made to members of the regular medical faculty of the University to

have them join in the proposed scheme. The disruption of the medical department of the University, it is not difficult to understand, would give the proposed college an admirable send off.

These three classes labored assiduously to secure an attendance of the proper complexion to carry an adverse vote against the University, and managed to enlist some who have since seen through their designs, but who were doubtless honest opponents of the present plan. The University made no effort to secure an attendance, preferring rather to rest its case upon its merits, than to depend for success on the tactics of the political wire-puller. We venture to assert that had the classes to whom we have above referred, as personally interested in an adverse criticism being passed on the faculty's action, refrained from voting, the expression of the Society would have been different.

The matter, however, has not yet been settled, and the action thus far will ultimately redound to the advantage of the University. It has already stirred up a popular indignation which no private institution can brook. The people will not stand listlessly by and see the institution in which they take most pride sacrificed to either gratify the personal animosity of individuals smarting under disappointed ambition, or to advance the interests of a private concern, working under a charter granted by the State. The gauntlet was thrown down by these parties at the late meeting of the State Society, and the people will take it up, and we have little doubt as to who will come out the victors.

We have an abiding faith in the ultimate triumph of the right, and that the University is right, is with us a religious conviction.

We append herewith an editorial article from the *New York Medical Record* on the same subject :

"The State Society of Michigan, at a recent meeting, and after an exciting debate, adopted a resolution condemning the course of the faculty in regard to the homœopathic question. An amendment was offered to the Constitution, which, under the rules, was laid over until the next annual meeting, refusing fellowship to any graduate of the University while the present

arrangement continues. Amid the excitement attending those proceedings, the Society adjourned, with much of its important business unfinished.

Every one interested in the proper solution of the matters in dispute will be sorry that such radical measures have been adopted, and that such a spirit of partisan zeal has controlled the deliberations of a strictly scientific body. Nothing can show more clearly that the Michigan State Society is absurdly intolerant of homœopathy than the recent action alluded to. The extreme attitude assumed is of itself a confession of weakness, an attempt to force conviction by arbitrary means, rather than a manly and fearless endeavor to meet the questions at issue, and discuss them with the calmness of men who desire to know the truth, the whole truth, and nothing but the truth. If we are ever going to expose the error of homœopathy we must give it plenty of light and air. We have dignified it with martyrdom long enough. If we are not afraid of it we can afford to offer it every opportunity for proving its superiority. The faculty of the University, in view of the issue at stake, should be upheld rather than condemned. The idea of yielding up the school to the homœopaths is preposterous. The liberality of conceding the homœopaths even what they have, will afford them the surer means of working out their own destruction.

Homœopathy is a rank weed that has always flourished in the low and damp recesses of hypocrisy, and we have fostered this tendency by shadowing it with our prejudices. The longer we do this, the stronger will be its growth, and the more effectually will it entwine with the ignorance of the masses. If, on the contrary, we give it the impartial sunlight of truth, it must sooner or later shrivel into the infinitesimal proportions of its own doctrines. We, at least, are willing to give it such a chance. It never can be done, however, by any such resolutions as were passed by the Michigan State Society."

THE KINCHIN LAY IN MEDICAL ETHICS.

The following from the Detroit *Tribune* is too good to be lost. While it illustrates admirably the stand taken by the State Society and its illustrious "committee of nine," its appearance in one of our leading secular journals is suggestive, as showing the ridicule to which the society has subjected the profession among an intelligent laity:

"The precise form and scope of the resolutions on the University question reported by the majority of the State Medical Society's committee indicate that those gentlemen must have recently devoted some of their

valuable time to the profitable perusal of the fascinating novel of Oliver Twist, and that they retained a vivid recollection of the following portion of its forty-second chapter, in which Mr. Noah Claypole and Mr. Fagin discuss and decide upon the plan of business procedure calculated to the most completely employ and reward the former's peculiar talents:

"What do you think, then?" asked Noah, anxiously regarding him. "Something in the sneaking way, where it is pretty sure work, and not much more risk than being at home."

"What do you think of the old ladies?" asked Fagin. "There's a good deal of money made in snatching their bags and parcels and running round the corner."

"Don't they holler out a good deal, and scratch sometimes?" asked Noah, shaking his head. "I don't think that would answer my purpose. Ain't there any other line open?"

"Stop!" said Fagin, laying his hand on Noah's knee. "The kinchin lay."

"What's that?" demanded Mr. Claypole.

"The kinchins, my dear," said Fagin, "is the young children that's sent on errands by their mothers with sixpences and shillings; and the lay is just to take their money away—they've always got it ready in their hands—then knock 'em into the kennel, and walk off very slow, as if there were nothing else the matter but a child fallen down and hurt itself. Ha! ha! ha!"

"Ha! ha!" roared Mr. Claypole, kicking up his legs in an ecstasy. "Lord, that's the very thing!"

The majority of the Committee of Nine in their report curiously omitted to denounce the Legislature which is primarily responsible for the state of affairs at the University; nor did they seek to stigmatize the Regents who were the immediate agents in the establishment of the Homeopathic College; nor did they in direct terms affix the brand of their fraternal displeasure upon Drs. Ford, Palmer, Dunster, Maclean, and Frothingham, of the Faculty; but upon the young men still in the Medical Department the full weight of their displeasure fell. These youths—the least responsible of all concerned—they proposed to place under the ban at the outset of their professional careers by refusing them fellowship. The peculiar curving of Claypole and Fagin figures in this programme. The Legislature, the Regents, the Faculty—they are powerful bodies, with strong constituencies behind them, and they may show fight to some purpose. But the boys on the students' rolls—their means of resistance are more doubtful, and thus they invite attack. And so the majority of the committee joined in Mr. Claypole's enthusiasm over "the kinchin lay," and it figures in the formal phraseology of their fourth resolution.

And all this leads to one additional reflection: If rival institutions desired to gain the patronage of a strong medical school, what more adroit way to gain this end could they devise than to hold up before its students the bugbear of professional ostracism at the outset of their business lives?"

WE commend the following editorial article clipped from *New Remedies* to the careful consideration of the profession in Michigan. If the condition of affairs therein foreshadowed shall ever become a necessity in this State, the illiberal policy enunciated at the late meeting of the State Medical Society will have been its cause. It does seem strange that the lessons with which history teems should be lost on the regular profession. Persecution and illiberal treatment of an enemy can have but one effect and that the arousal of a sympathy for the weaker, and this sympathy is all the more likely to obtain among those who are incompetent to pass judgment on the questions over which the antagonists wrangle. The melancholy display made at Ann Arbor on the 11th ult. will do more towards advertising homœopathy and bringing about the time when the recognition of its practitioners will be a question of bread-and-butter, with the younger members of the regular profession especially, than any other thing it was in the power of the State Society to do:

"On the twenty-fifth of last month, at a dinner given by nearly eighty physicians of this city to one of their number who was about to accept a position in a neighboring town and a professorship in its medical school, the guest of the evening made some remarks which, at the time, produced a profound impression on the company, and elicited loud applause. He said, in effect, that the time is rapidly approaching when a question would force itself upon the attention of the profession, and would demand most careful and thorough consideration, viz: the propriety of consultation with so called homœopaths. While he disclaimed utterly any belief in their therapeutical theories, it is not to be disputed that there are among them a large number of men who, by education and social qualities, are competent practitioners. An important element of the question is, the fact that our predecessors, from whom we receive our ethical code, have so interpreted its rules that its enforcement has enabled the homœopaths to appear before the community at large as martyrs in a just cause, and one result has

been that they count among their sympathizers many of the most intelligent and influential members of society. The speaker then proceeded to suppose cases which might arise in the practice of any physician, in which the duties imposed upon all of us by a common humanity would require that we should co-operate with a homœopathist in spite of ethical rules. Another speaker followed him in the same vein, and it was evident from the attention which the company gave, and the enthusiasm of their applause, that the sentiment met with a ready endorsement.

Now the company was not a mere handful of unheard-of and uninfluential men, but, although mostly composed of the younger members of the profession, some are professors in medical schools, many are connected with prominent hospitals and dispensaries, and are officers in our medical societies; and a few of them, including the speaker, were the champions of the recent demonstration in the "Presbyterian Hospital Affair."

Another fact, quite apparent to one familiar with the company, was the large proportion of those whose attention is devoted to some specialty in practice, and this we purpose making the text of what we have to say further on this subject.

At the outset we agree with the sentiments expressed at the meeting—that it is unfortunate that our predecessors should have made the mistake of allowing a question of therapeutics, rather than that of sufficiency of medical education, to be the dividing line between "regular" and "irregular" practice. However quixotic and improbable a man's practice and theories may be, he gains the confidence of persons unable to judge of their merits just in proportion to the opposition he meets with, and suffers most from quiet neglect.

What we wish particularly to call attention to, however, is the apparent growth of sentiments favorable to the homœopathic fraternity among "regular" specialists. It will readily be perceived that, as a class, the latter are more likely to be benefited by an abolition of the ethical obstacles to consultation with "irregulars" than the general practitioners will be, and it is very apparent that any attempt to reorganize our ethics in this regard will most likely find its initiators among them. The questions involved are numerous, however, and their settlement is by no means likely to be an amicable one.

As it is, the general practitioner is having a hard time of it. First he gave up the dispensing of his remedies to the apothecary; and now complains that so many people use patent medicines and go to the apothecary for both medicine and advice. Then the specialists organized; and, to supply themselves with clinical material, opened special dispensaries and

hospitals where all who come are treated, and little or no pains is taken to limit the charity to the really poor. Then, by the aid of the notoriety gained through their connection with such institutions, and the multitude of medical schools, the specialists monopolize the greater part of the practice among those who prefer to pay; so that the general practitioner is deprived both of his opportunities for acquiring a knowledge of special affections; of his patients, who prefer to go to the dispensary or hospital where they can be treated gratis by specialists, and of the patronage of those who, being abundantly able to pay, prefer to consult the man who has become noted through his superior facilities for advertising the attention he gives to one department, rather than trust the case with the general practitioner; and so, to save himself from bankruptcy, the latter, too, must needs set up his specialty.

Now the natural result of all this is, that about the only general practitioners left will be the older men, who have secured their position, and continue to practice because it is easier to keep on than it is to stop or change, and the "homœopaths," who have not been allowed to enter the hospitals and dispensaries, and *per force*, have not developed their talents in special ways, but have employed their time and energies in getting sympathizing patients.

Between dispensaries, hospitals, college cliniques, and the rapid increase of their fellows, our friends the specialists are rapidly exhausting their available resources; and it can not be wondered at that they should deeply appreciate the needs of the "general practitioner" in homœopathy, and his unfortunate patient, for skilled advice and assistance in their dilemmas."

SANITARY CONDITION OF PHILADELPHIA.

The following circular has been received with a request that we give it an insertion:

"Owing to the very large number of persons who contemplate a visit to Philadelphia during the coming summer, it seems important that the utmost publicity should be given to all facts bearing on the sanitary condition of the city."

The following statistics, which have been obtained from the most authentic sources accessible, represent the mortality in some of the chief cities of the world during the past four or five years:—

	Number of Years.	Average Population.	Average Total Mortality.	Average Death Rate Per Thousand.
VIENNA,	5	648,560	20,424	31.42
NEW YORK,	5	994,458	29,601	29.93
BERLIN,	4	950,000	28,420	29.91
LONDON,	5	3,084,488	76,741	23.33
PARIS,	4	1,852,792	42,724	23.06
PHILADELPHIA,	5	744,831	16,573	22.27

While thus showing an average rate of mortality more favorable than that found in any other city containing over 500,000 inhabitants, Philadelphia has recently (1874) attained a degree of healthfulness almost unparalleled, viz: with a population at that time of 775,000, the number of deaths was but 14,966, giving a death rate of only 19.3 per thousand. These very favorable results are largely due to the abundant and cheap water-supply, and to the opportunities given, even to the poorest citizens, for the enjoyment of pure country air, in the great Fairmount Park, which contains 2991 acres. The extent to which this is valued by the citizens may be inferred from the fact that during the year 1875, the Park was visited by over eleven million persons.

The most powerful influence of all, however, is the absence of that overcrowding of the population, which is the most fruitful source of sickness and death in many quarters of nearly all other large cities. This will be more clearly comprehended when it is remembered that the 817,488 inhabitants of Philadelphia are spread over an area of 129 1/2 square miles, which are traversed by more than one thousand miles of streets and roads; and that the city contains, in addition to other kinds of buildings, 143,000 dwelling-houses occupied by families,— a number exceeding by over 40,000 that of any other city in America.

The climate of Philadelphia is also, on the whole, a favorable one, although presenting many of the peculiarities common to inland localities. The mean annual temperature of the last ten years is 53.73° Fahrenheit; the average annual rain-fall is about forty-five inches.

The following table exhibits the mean temperature of each month for the past ten years, showing that the range is far less

extreme than is found in many other less favorably situated localities:—

MEAN TEMPERATURE (FAHRENHEIT) OF EACH MONTH
DURING THE PAST TEN YEARS.

JANUARY.....32.72° F.	MAY.....63.24° F.	SEPTEMBER.....67.72° F.
FEBRUARY.....33.12 "	JUNE.....73.54 "	OCTOBER.....56.03 "
MARCH.....39.16 "	JULY.....78.74 "	NOVEMBER.....43.34 "
APRIL.....53.36 "	AUGUST.....75.92 "	DECEMBER.....33.92 "

It is thus seen that only during the months of June, July, and August does the mean temperature rise to a high point. During this period there are very rarely any prevailing epidemic diseases; and the chief mortality occurs among children, especially among the poorer classes.

The health of Philadelphia at present is unusually good. Timely efforts have been made to secure an abundant water-supply to meet the great increase in the demand which must be expected this summer as compared with previous years. Constant watchfulness will be exercised by the authorities to maintain cleanliness, and to avoid or remove every possible cause of disease.

Within the Exhibition grounds a rigid sanitary inspection will be maintained, under the control of the Bureau of Medical Service; and thus a guarantee will be afforded that no cause of infection or disease will be allowed to occur through neglect of this important duty.

The object of this circular has been to call attention to the unusual sanitary advantages of Philadelphia, and to the preparations which have been made to ensure the highest possible degree of healthfulness during the approaching Exhibition season. It is proposed to issue at certain intervals other circulars, announcing in an official and accurate manner the sanitary condition of the city, so that entire security may be felt by all who desire to visit the Centennial International Exhibition.

WILLIAM PEPPER, M. D.,
Medical Director.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

We have only space in our present issue to notice very briefly the important meeting of the American Medical Association which took place in Philadelphia last week, and we will confine ourselves to those of the transactions of that Association which relate to the medical politics of our own State.

We may mention, however, that the meeting was in point of numbers the largest which has ever taken place, seven hundred and thirty members having been registered. On the whole the meeting was a harmonious and successful one.

Although medical matters in Michigan were barely mentioned in the convention, there can be no doubt that no subject engaged the attention of the individual members, none was so much inquired about and discussed in private conversation. Two great facts were universally known to the members, viz: 1st, That the University of Michigan had, notwithstanding its life-long resistance to homœopathy, and its excellent record in other particulars, become in some way mixed up with homœopathy; and 2d, That the Medical Faculty and the State Medical Society were divided in opinion as to the policy of the Faculty. As to the precise nature of the relations of the Faculty to the Homœopathic department the most extraordinary ignorance was found to prevail. Very many members of the convention admitted that all the information they possessed on the subject had been obtained from *reprints* sent them from the *Detroit Review*. Members of the judicial council admitted that they had been strongly prejudiced against the Medical Faculty of the University by these circulars, and they admitted to having been personally interviewed by members of the Detroit Medical College, from whom they received statements which were at once shown to be utterly untrue. Members of this convention from the most remote regions had the same story to tell. Under these circumstances it was not to be wondered at if the members of the Faculty and the friends of the University found at once that they had a mountain of prejudice and a great deal of bitter

feeling to contend with. This unfavorable impression was of course aggravated by the other prominent fact, viz, that the State Medical Society had taken strong grounds against the Faculty. The advocates of the Faculty, contented themselves with stating the true history of their relations to Homceopathy, before all with whom they came in contact, and they took the precaution to have unimpeachable documentary evidence to substantiate their *every statement*. The result was that in *almost every one* of the innumerable conversational debates in which they engaged during the whole week, the verdict was universally in favor of the policy of the Faculty, and much gratitude was expressed for the amount of new light which had thus been thrown upon a hitherto grossly misrepresented and no less grossly misunderstood subject. The very glaring fact against the Faculty, a fact of which every member of the convention had been made fully aware by the usual means, viz.. a reprint from the *Detroit Review* which had been sent them gratuitously, was the dispute between the State Society and the Faculty. This however proved to be a weapon which recoiled with all the force and precision of the Australian Boomerang. A few facts, *only a few*, as to the history of the State Medical Society had to be mentioned to place that matter in its true light and to elicit from *everyone* the strongest expressions of *contempt* and *disgust*! These facts were: (1.) The Committee of Nine which more than once was designated by the odious title of *star chamber*. (2.) The five minute resolution, by which all interchange of opinion was effectually cut off. (3.) The strangulation of Dr. Frothingham's resolution asking the Society to unite with the Faculty in eliminating *all* sectarianism from the University. And last, but not least, the published record of the Michigan State Medical Society with its committee on legislation of which Dr. F. Pratt and Dr. G. K. Johnson are members. A committee who had personally associated and consulted, by their own published confession, with an irregular practitioner with the view of securing infinitely closer relations with quackery and bumbug.

gery than the Medical Faculty would ever have dreamed of submitting to. When the last morning of the convention arrived, and the judicial committee reported that the charges preferred by Dr. Frothingham against Drs. Pratt and G. K. Johnson, and the other delegates from the Michigan State Medical Society were of such a nature, and required the examination of so much documentary evidence that these Michigan gentlemen would have to remain under charges for a whole year until the judicial council could have time to try them and decide their case, the whole convention was convinced that there was something rotten in the state of Denmark, and that, too, where it had least been suspected. "The biter bitten" was a remark which a quick ear could catch in various directions.

If the profession of Michigan required any additional evidence of Dr. Foster Pratt's utter incapacity as a legislator, or even a "log-roller," it is to be seen in the resolution which he penned, and which in his unhappy condition of disfranchisement, he had to ask a member in good standing to move for him. Here it is: "*Resolved*, That members of this association who in any way aid or abet the graduation of medical students in irregular or exclusive systems of medicine are deemed thereby to violate the code of ethics of the American Medical Association." We venture to assert that a looser or more slovenly resolution was never offered to an educated and scientific convention. Fortunately, Dr. Frothingham with a presence of mind and astuteness which cannot be too highly admired, supplemented the glaring deficiencies of Dr. Pratt's feeble and gasping effort at legislation, by instantly preparing the following resolution which was carried unanimously:

Resolved, That the judicial council be asked to define precisely what constitutes "aiding and abetting" the graduation of irregular practitioners and report at the next annual meeting of the Association.

This resolution might be looked upon as a part or continuation of the previous one, and if so, surely for once the mathe-

matical axiom is reversed and the part is greater than the whole.

Let the Association, through its judicial council once define precisely what it is to aid and abet in the graduation of irregulars and then all schools and colleges and scientific individuals can govern themselves accordingly. For the present we feel in duty bound to withhold our judgment and to possess our soul in patience until the authoritative and final voice of the judicial council is heard.

In the meantime we are happy to state that all the leading schools have extended the right hand of fellowship to the Faculty of the University of Michigan; and their policy is receiving the approval and applause of some, at least, of the best known and most widely read medical journals, and we have no doubt that this will soon be the case with all except the single journal, perhaps, whose interests are so much dependent on an adverse criticism of the Faculty's position. The tide of sympathy for the Faculty and against the State Medical Society, was very materially strengthened by the bare-faced confession of individuals representing the State Society that they were not fighting homœopathy, but that they were engaged in a deep-laid conspiracy to destroy the medical department of the University.

SALICYLIC ACID IN ACUTE RHEUMATISM.

Salicylic acid has recently been received with much favor as a remedy in this painful affection. Hitherto all methods of treatment may be said to have signally failed, the disease apparently in spite of all medication running its natural course. That we have in salicylic acid an article which does influence the course of the affection, seems indisputable from the evidence which has accumulated during the past few months. We have recently had occasion to employ it and can add our testimony to its effi-

cacy. We employed it a few weeks ago on a very marked case. We had treated the patient three years previously for an attack of acute rheumatism, on the colchicum and alkaline plan with very unsatisfactory results, the man not being able to leave his bed for nearly three weeks. In the present instance we were sent for on the second day of the attack, found the temperature 103° , with very severe articular pains in knees, hips and wrists, the slightest attempt at motion being attended with pain almost unbearable. After the administration of a cathartic, he was placed on five-grain doses of salicylic acid every three hours. On visiting him twenty-four hours later, we found the temperature reduced to 100° , and the pain very much alleviated. The dose of the acid was reduced to three grains, and on the subsequent day the temperature was normal and we found the patient sitting up in bed quite free from pain. Convalescence progressed without any drawback. This case was certainly a remarkable one, and very illustrative, but is not less so than a number that have been recorded. Large doses have been noticed by some to be followed by unpleasant heart symptoms. We have not noticed any such, and the symptoms noted may have been due to the disease and not the medicine. The careful physician is ever vigilant and should any unusual symptoms manifest themselves it would be judicious to diminish or suspend for a time the doses. Salicylic acid, on the whole, may be regarded as the most reliable remedy yet brought to our knowledge in rheumatism. We use the following formula :

R. Salicylic acid, $\frac{3}{4}$ ij.
Powdered gum arabic, $\frac{3}{4}$ ij.
Sugar, $\frac{3}{4}$ ss.
Oil of bitter almonds, gttjv.
Distilled water, $\frac{3}{4}$ ij.

M. Sig—a teaspoonful every three hours.

Reviews and Bibliographical Notes.

A TREATISE ON SURGERY, ITS PRINCIPLES AND PRACTICE. By T. Holmes, M. A., Cantab., Surgeon to St. George's Hospital. Four hundred and eleven illustrations, pp. 960. Philadelphia: Henry C. Lea. Detroit: E. B. Smith & Co.

As stated in its preface, this work is intended to some extent as an introduction to the elaborate System of Surgery, of which Dr. Holmes is editor, and which has made for him a reputation which ensures for any production from his pen a careful perusal. The present work viewed from an English standpoint, will bear such a perusal well—but being essentially an English book there are some parts in which, for this country, it might be improved by a careful American editor. Very little reference is made throughout to American surgeons, some of whom have originated appliances, without a description of which, we hold no work on surgery can be said to be complete. The department on Diseases of the Eye, by R. B. Carter, Ophthalmic Surgeon to St. George's Hospital, is a very valuable addition, and places the book on this point in advance of any other works on general surgery.

The illustrations are very neatly done, and the mechanical execution of the book is in the publishers usual excellent style.

A TREATISE ON DISEASES OF INFANCY AND CHILDHOOD. By J. Lewis Smith, M. D., Physician to the N. Y. Infant's Hospital; physician to the Catholic Foundling Asylum; physician to the Protestant Infant Asylum, etc., etc. Third edition, enlarged and thoroughly revised; with illustrations. pp. 725. Philadelphia: Henry C. Lea. Detroit: E. B. Smith & Co.

This standard work comes to us with fresh attractions, and is in its present shape second to no other work on the diseases of children. The present edition is considerably enlarged and

made more complete, both by the discussion of several diseases omitted from the former editions, and by a more full consideration of a number of important ailments. The opportunities enjoyed by the author have given him facilities unsurpassed for clinical observation, and that he has improved them is manifest throughout the book. Cerebro-spinal fever, a mention of which is not made in former editions, is treated very comprehensively. In treating of the causation of this too fatal disease the author propounds the following questions to which he himself gives negative answers: Does the cause of cerebro spinal fever emanate from the soil? Does the cause exist in the diet, as some competent observers have supposed? Is cerebro-spinal fever propagated by contagion? The cause exists in the atmosphere, though so simple that we may never be able to detect it. The disease is one of the many examples in corroboration of Humboldt's statement, that there is no subject of scientific inquiry more obscure than the laws which control epidemics. All observers have remarked that anti hygienic conditions, though obviously subordinate to the unknown atmospheric cause, nevertheless strongly predispose to the disease. In treatment the author relies on bromide of potassium, with addition of morphine to allay pain. The good results witnessed after the administration of the latter article should disabuse the minds of physicians of the dread of its employment in acute affections of the brain. Counter-irritation by means of dry cups and cantharidal blisters is an invaluable adjunct.

THE VEST-POCKET ANATOMIST. By C. Henri Leonard, A.M.,
M.D., Detroit.

This is one of the *multum in parvo* series published by Dr. Leonard. We should regard it as a very convenient work to carry with one to refresh one's memory on points on which it is but too apt to grow rusty after leaving the dissecting room. The origin and insertion of all the muscles are given, with the origin, course and distribution of arteries, veins and nerves, and all the salient points in osteology. A very valuable book for the advanced student to have on the table beside his subject.

Price, in paper, 50 cents.

METEOROLOGICAL REPORT, FOR APRIL. C. HENRI LEONARD,
M. D., *Observer.*

BAROMETER.—Highest, 30.468; lowest, 29.319; range, 1.149; average, 29.964.

TEMPERATURE.—Highest, 69; lowest, 25; range, 44; average, 44. For '72 it was 46.8; for '73, 42; for '74, 37.3; for '75, 40.9.

WINDS.—Greatest velocity per hour, 43 miles; prevailing direction, west, (W., 9 days, N. W., 4 days, S. W., 2; E., 7;) total number of miles "traveled," 5,690; 956 miles less than last month.

RAINFALL.—Clear days, 5; cloudy 4; rainy, 13 days; total precipitation, 1.80 inches! The same month for '72 we had 2.15 inches; in '73, 4.94 inches; in '74, 1.39 inches; in '75, 0.70 inches. The greatest amount any one day was on the 13th; the depth was 0.56 inches.

MOISTURE.—Greatest amount present any one time, was at 2 p. m. on the 12th and 13th, there being 5.37 grains to each cubic foot of air upon each date. This is the largest amount for the season. At 9 p. m. of the 12th there was 3.95 grains, and at 7 a. m. of the 13th, on the morning observation of the 12th, and the evening of the 13th, there was 3.59 grains present. On no day was "saturation" complete, it then being from 85 to 96 per cent.

OZONE.—Present every day but one; this was on the 13th. Maximum coloration 3; this was revealed at five different observations. Days of the lower humidity or moisture sulphuric acid—none.

OBSERVATIONS FOR MAY.

BAROMETER.—Highest, 30.367; lowest, 29.654; average, 29.975; range, 1.713.

TEMPERATURE.—Highest, 85 (this was on the last day of the month); lowest, 30 (this was on the first day of the month); average, 57.5; range, 55. The daily average was the same as last year, for May, but lower than May of '74 by 1.5 degrees. Higher than the Mays of 1873 and 1874 by about one and one-half degrees.

WINDS.—Greatest velocity per hour, 20 miles. Prevailing direction E. Total number of miles traveled, 4,836.

CLOUDS.—Rain fell on 20 days; clear days, 8; cloudy, 13.

RAINFALL.—Greatest daily, 1.65 inches; this fell from 2:45 to 4 p.m. on the 28th inst. Total for the month, 5.64 inches. This has been quite a rainy month, though not quite so much fell as in May of last year. *Three* times as much, however, as in May of '74, nearly twice as much as in May of '73, and a trifle more than in May of '72. In our "shower" of 1½ hours duration on the afternoon of the 28th, we had almost as much fall as the total amount for the month in '74.

MOISTURE.—The whole month has been moderately abundant in moistures. At several observations there has been found over 6 grains to the cubic foot of air. The most was 6.66 grains; this was on the evening of the 20th; in the afternoon of the same date we had 6.62 grains. The day preceding and following had over 6 grains per cubic foot. Only a slight rain-fall (.36 inch) for 1 to 3 days. Ozone present on each day to 1 degree.

OZONE.—Present on 29 days (test paper was lost on one day). Maximum coloration, 3; this was on the 27th. Coloration of 2 on the 1st, 4th, 8th, 9th, 11th, 12th, and 19th. The moisture present would seem to have hindered the production of ozone this month; at least, other observers have gotten more decided returns.

No tests were made for sulphurous acid. As it is incompatible with ozone, it follows that none could have been present, as on every day but 2, ozone was indicated.

**MORTALITY REPORT OF THE CITY OF DETROIT FOR THE MONTH
OF APRIL, 1876. Prepared from Statement furnished by C. H. BORGMAN,
Esq., City Clerk.**

I.—ZYMOTIC DISEASES.	
Cholera Infantum.....	1
Croup.....	2
Erysipelas.....	1
Measles.....	5
Puerperal Fever.....	3
Remittent Fever.....	1
Small Pox.....	4
Scarlet Fever.....	3
Typhoid Fever.....	8
—	—
Total.....	28
II.—CONSTITUTIONAL DISEASES.	
Bright's Disease.....	2
Childbirth.....	2
Cancer.....	4
Chronic Diarrhœa.....	1
Consumption.....	22
Dropsy.....	3
Debility.....	4
Epilepsy.....	1
Fatty Generation of Heart.....	1
Inanition.....	1
Old Age.....	4
Softening of Brain.....	2
Scrofula.....	1
—	—
Total.....	48
III.—LOCAL DISEASES.	
Aphthæ.....	1
Apoplexy.....	3
Bronchitis.....	7
Convulsions.....	18
Congestion of the Lungs.....	10
“ “ Brain.....	6
Colic.....	1
Cerebral Meningitis.....	5
Dysentery.....	1
Fracture of Leg.....	1
Fracture of Skull.....	1
Heart Disease.....	2
Hydrocephalus.....	3
Inflammation of the Brain.....	3
“ “ Bowels.....	3
“ “ Lungs.....	11
Œdema of the Lungs.....	1
Obstruction of Bowels.....	1
Paralysis of Brain.....	1
“ Lungs.....	1
Stone in Bladder.....	1
Teething.....	1
Tumor.....	1
—	—
Total.....	83
Accidental.....	
Found Dead.....	1
Stillborn.....	16
Suicide.....	2
Unknown.....	5
—	—
Total.....	28
NATIVITY.	
Detroit.....	104
United States.....	27
Ireland.....	10
France.....	5
Germany.....	15
England.....	7
Canada.....	6
Prussia.....	3
Scotland.....	1
Austria.....	1
Italy.....	1
Poland.....	1
Switzerland.....	1
Sweden.....	1
Bavaria.....	1
Unknown.....	3
—	—
Total.....	187
AGES.	
One year and under, including still-born.....	6½
One year and under two.....	10
Two years and under three.....	5
Three years and under four.....	6
Four years and under five.....	5
Five years and under ten.....	7
Ten years and under twenty.....	10
Twenty years and under thirty.....	18
Over thirty years.....	57
Unknown.....	4
—	—
Total number of deaths.....	187
Estimated population.....	110,000
Estimated annual death rate in 1,000, from April deaths	20.4
PER CENT. TO TOTAL MORTALITY.	
Zymotic diseases.....	14.97
Constitutional diseases.....	25.67
Local diseases.....	44.38
Under five years.....	48.66
Between five and ten.....	3.74
Between ten and thirty.....	13.99
Thirty and over.....	30.48

THE
PENINSULAR JOURNAL
OF MEDICINE.

JULY, 1876.

Original Communications.

PNEUMONIA—A Paper Read Before the St. Clair, Sanilac and Lapeer Medical Society, by H. McCOLL, M. D., Lapeer, Michigan.

In taking up this subject, allow me to state that I do not intend any exhaustive review, but only such points in the ætiology, pathology and treatment of the disease as seem to me most important, together with such queries as I hope will elicit discussion. I may state further that the views which I herewith present have been formed after studying the subject in the light of clinical experience in my own practice, not only, but in the hospital practice of Profs. Flint, Loomis and Thomson.

In taking up the ætiology of pneumonia, I would divide its causation into predisposing and exciting. There is, I believe, no attack of pneumonia without a predisposing cause, whether we can find it out or not. I do not believe there ever was such thing as an idiopathic case of pneumonia. Among the predis-

posing causes, age stands pre-eminently in the front rank. I am speaking now of croupous or lobar pneumonia, not of lobular pneumonia as found in children. We find it very prevalent in old age, and I may say that it is a disease of adult life, seldom occurring in early life originally as croupous pneumonia. Among the other predisposing causes may be mentioned, particularly in our climate, malaria, which, by its deteriorating influences, so much reduces the vital forces as to bring the system into such a condition that it falls an easy prey to any exciting cause. Another fertile cause is alcoholism; the hard and steady drinker is liable to an attack; septic poisons, rheumatism, gout, cardiac organic leisons, carbonic acid, or anything which tends to place the system below par will act as a predisposing cause. I do not think that any person with a system at par, will have an attack of pneumonia; true, I have seen men apparently at par, taken down, but some cause could be traced; for instance a young rugged, medical friend of mine in New York city, attended the theater one night last winter, when Rignold was playing, the place was crowded, the night cold, ventilation deficient; he came out with the system surcharged with carbonic acid, went home, felt cold, had a chill followed with pneumonia of which he died in three days. Now this was a carbonic acid pneumonia. As to the exciting causes, I believe that cold stands first in the list; being exposed to a draft or otherwise suddenly lowering the temperature of the body and thus checking the secretions. Epidemic pneumonia may be caused by some influence, some change in the atmosphere. Septic poisons also excite and pneumonia may be developed in consequence.

As to the difference in type which we find, I believe that it depends on the predisposing cause.

It commences with a chill, pleuritic pains, increased respiration, dyspnoea dependent on nervous prostration, cough, at first dry, in twenty-four hours with the characteristic sputa. The chill, cough and sputa may be absent in old persons, and all the symptoms masked except those obtained by auscultation and percus-

sion. In children it may be ushered in by convulsions with all the symptoms of cerebro-spinal meningitis, and in a time when an epidemic of cerebro-spinal meningitis prevails, it may be entirely overlooked. In the third stage the sputa, in favorable cases, changes to a creamy consistence. Tobacco juice expectoration is very unfavorable.

The temperature rises suddenly and on the third day may be 103° or 104° , which may increase to 107° and over, falling either gradually or by crisis on the fifth day, thus showing the character of the convalescence. If by the seventh or eighth day the temperature does not fall, we generally have typhoid symptoms indicative of the fact that purulent infiltration is taking place. When typhoid symptoms occur they are dependent on the predisposing cause.

In the old, we often have typhoid symptoms from the first, with very few symptoms referable to the pneumonia, but almost all pointing to typhoid fever. In alcoholic pneumonia we have often the full symptoms of tremens developed with but few which would cause us to look for pneumonia.

In eight out of ten cases in alcoholic pneumonia the solidification takes place at the apex of the lung and the temperature is higher than in ordinary pneumonia.

Physical signs: First stage of engorgement, we have slight dullness, slight increase of vocal fremitus, rude or broncho-vesicular respiration, crepitant rales at the end of inspiration, which generally commence at the end of twenty-four hours, unless the pneumonia is central; infiltration into the cells of fibrin and lymphoid cells. The characteristic sputa arises from the engorged condition of the bronchial mucus membrane and the laceration of small capillaries. We have now reached the stage of dullness or red hepatization. If the patient does well, we go to the stage of gray hepatization, the change being owing to the change of color in the blood in the effusion. If, however, the progress is not favorable, the cells become more distended, the exudation increasing in them, cell formation going on rapidly,

the alveoli breaking down by the cells forcing their way through, purulent infiltration taking place, small abscesses forming, and after four or six weeks the lungs clearing up. Pleurisy retards recovery by increasing the febrile movement.

Prognosis is influenced by age. After seventy or eighty years of age the cases will generally end fatally; from twenty to forty they generally recover, unless the cause is bad; if alcohol is behind they are almost sure to die.

Treatment: Uncomplicated pneumonia generally terminates spontaneously in from five to eight days. Some cases are going to die whatever treatment you adopt, and some are going to recover whatever course you pursue. To form a correct idea of the course of treatment to be pursued, we must know something of the cause. In mild cases no treatment is required, yet good results in convalescence are derived from good treatment. Bleeding was resorted to from the earliest to very recent dates. There is but one condition in which I would bleed, *i. e.*, if in a full-blooded, robust man I found pneumonia, the lung becoming oedematous, heart engorged, then I would bleed. Statistics show that the fatality is not so great now as when blood letting was followed. It retards convalescence, and though it may alleviate some of the violent symptoms, they return again, and go on till the day of crisis. There is no evidence that it aborts the disease, nor do I believe that a case of pneumonia was ever aborted. Antimony and mercury were given by Laennac for the same purpose, but the same objection stands against them as against blood-letting, *viz.*: that they tend to retard recovery and do not abort the disease, and they increase the rate of mortality. Mercury was given to hasten the absorption of the inflammatory product, but absorption commences by the deposit undergoing fatty degeneration, and mercury prevents this and increases cell formations and so tends to retard recovery.

Aconite and ver. vir. are given to diminish heat and lessen the rapidity of the heart's action, but they interfere with nutrition, and there is no evidence that they hasten the day of crisis

or beneficially influence convalescence, and when we remember that one of the great dangers in pneumonia is from paralysis of the heart and that both these drugs kill by producing heart failure, is it wise to use them unless we can see some positive advantage accruing from their use? Digitalis is given to control the heart's action, but except in functional disturbance dependent on nervous excitement and not on waste of muscular tissue, I do not think that it tends to strengthen the heart's action, and as in pneumonia the failure is dependent on tissue metamorphosis, so digitalis can do no good.

If there is much pleuritic pain, give hypodermic injections of morphia. If much cough, give chloral hydrate, eight to ten grains, two or three times a day; may give potass. chlor. to act on the secretions from the mucous surfaces. But if we are in doubt as to what, or how many remedies to give, we should give the patient the benefit of the doubt. In bad cases guard against two dangers: failure of heart power and long continued high temperature, which produces blood changes, hastens cell formation and tissue metamorphosis. Pathologists speak of heart clot as one of the conditions to be avoided; but heart clot is dependent on paralysis of the heart and its consequent inability to completely empty itself.

A man who has taken alcohol constantly, though perhaps not a hard drinker, has changes produced in his heart; he has hypertrophy of the heart walls, and that organ fails rapidly in pneumonia and death follows in a short time.

High temperature, by changing the condition of the blood, changes the nutrition of the muscular coats as in typhoid fever. Cold has been and is used to diminish temperature in almost all diseases. My observation with cold in pneumonia, has been confined to the use of ice bags to the lung invaded, but I cannot speak favorably of it, as in all cases of this kind it tended to increase the extension to adjoining lobes and to produce a typhoid condition owing to purulent infiltration; besides it only lowers the temperature temporarily, and when it

goes down rapidly in one, five or six days, it is owing to the time of crisis having arrived and resolution having commenced. Now the high temperature is caused by rapid molecular metamorphosis and cell development, white globules of the blood being forced through the walls of the alveoli. Can we arrest this process? If we can, then we lower the temperature. I believe quinia sulph. in large doses is the only reliable agent to do this, and whether it does it by acting as a tonic to the heart or arresting the motions of the lymphoid cells, we know that it lowers the temperature and arrests molecular metamorphosis. If then the temperature continues high at 104° or 105° steadily for a length of time, by giving from twenty to thirty grains of quinia sulph. and repeat in three or four hours if necessary, the heat is diminished. This does not arrest or abort the disease, nor does it hasten the day of the crisis, but it diminishes the heat, sustains the strength and hastens convalescence. If failure of heart power, give alcohol. There is no agent that acts as a cardiac stimulant like alcohol, but we cannot give it indiscriminately else we may do more harm than good.

Opium has been proposed, but I do not think it well, except to quiet pain. Blisters do good where there is pleurisy, or where resolution is slow. Other conditions of treatment will depend on the cause of the disease. If it be rheumatism, give alkalies, etc.; if malarial, give quinia, etc., etc., but do not bind yourself down to any routine course of treatment, but exercise judgment and reason in treating every case as emergencies arise, but above all be careful how you use depletives or cardiac sedatives in severe cases of this disease.

PART II.

As at our last meeting I considered briefly the subject of lobar or croupous pneumonia, I intend now briefly to call your attention to lobular or broncho pneumonia, especially in its relation

to chronic bronchitis, or, as it is termed, a winter's cold ; also shortly to the results of repeated attacks of broncho-pneumonia, perhaps of not very great severity but often recurring, leading finally to catarrhal phthisis.

We in this climate, and in all climates so changeable as ours, find a great many people suffering from repeated attacks of catarrh, or cold, and in a few years they seem to be seldom free from a cough from the beginning of the winter till summer opens up again, when they have at least a partial freedom from their troublesome enemy. And we as physicians often lay too little stress on matters so important—often dismiss the patient with the explanation that it is a cold or bronchitis, giving a prescription for some nauseous mixture, without enjoining the necessity of taking good care against exposure to the inclemency of the weather. Thus the patient takes one cold after another, and the bronchial mucous coverings are in a state of constant irritation, kept up as I believe by the presence of low organisms which find a good and fertile soil in the congested and irritated mucus surfaces, which constantly pour out abundant secretion consisting of mucus with detached epithelium, requiring quite active efforts at expectoration. When this process is kept up winter after winter emphysema is developed owing to the constant coughing ; and it is developed so gradually that we may not be able to diagnose it until it has made quite considerable progress, for we often find on autopsy very extensive emphysema where none was suspected during life. First the alveoli, owing to the effort at expelling the secreted mucus, lose their tone and elasticity, gradually dilate till at last instead of alveoli at the termination of a small bronchus we have but a small sac incapable of contraction, in which is secreted a gelatinous substance, pearly in appearance, containing mucus and fibrin which is expectorated with considerable difficulty, requiring a great deal of effort to remove the small body, which is the characteristic sputa of emphysema. Ultimately the patient is unable to expel all this secretion from the lungs and a portion remains as a plug in

one of the smaller tubes completely closing it up, causing the collapse of the lobule beyond. Around this plug a peri bronchitis is set up which extends to the collapsed lobule, and we have effusion of lymphoid cells, fibrin and serum, solidifying the lobule. This process takes place in various parts of the lung or lungs, for it may not and is not generally confined to one lung.

This process may go on invading neighboring lobules till quite a portion of the lung is involved, and then we may be able to detect dullness upon percussion, and detect some bronchial breathing with mucus rales in the bronchial tubes, but perhaps as yet no characteristic sputa of pneumonia. The thermometer will show a heat varying from 99.5 to 101. The patient may keep around attending to his work, coughing, and as resolution takes place in certain portions of the lungs feels a great deal better after a time. But this process is repeated once or twice in the same season and every winter, till at last the powers of resistance are entirely overcome and the patient takes to his bed or keeps his room, raising a cranberry juice sputa with increased febrile action; fine rales heard all over the chest, dyspnoea, cough and general debility.

During this process, which I have thus rapidly run over, some of the lobules undergo resolution, while others take on caseous formation and ultimately break down, forming abscesses or becoming permanent solidifications, forming in many cases what is called the pneumonic calculus, which remains latent for a longer or shorter period, according as there is a greater or less amount of irritation in their immediate vicinity. But when the process goes on to the stage last described then we may have resolution going on in the lobules in the usual time of from three to seven days, or as in lobar pneumonia an extension of disease, an increased deposit of fibrin with lymphoid cells, with increased heat dependent on this cell proliferation, rapid tissue metamorphosis going on and the patient burning to death. Or, if this calamity is averted, the lobules may become broken down rapidly, ending in what is vulgarly known as galloping consumption, and death ensues rapidly.

It is not to this phase of it, however, I wish to call your attention particularly, so much as to that which is the result of what we are apt to think of more trifling importance where successive crops of lobules become invaded taking on caseous transformation and remaining in a latent condition for quite a length of time ; but each cold invades a few more lobules, some of which only undergo resolution. This is repeated often, and we find on physical exploration of the chest signs of solidification, not confined to the upper part of the lungs as in tuberculous phthisis, but scattered all over especially along the posterior and marginal borders of the lungs, and our patient is dying by inches. He has catarrhal phthisis, and that too in a form which can be cured under proper management, especially hygienic.

A few words on treatment and I am done. In all the stages of this disease we cannot use depressive measures, for the system is already below par ; in fact is never up to the normal standard of a first-class case. First, then, to treat the initial symptoms we should impress on our patients the necessity of taking care of a bronchitis, keeping themselves in an even temperature ; which will be sufficient in most cases to effect a cure. When the grave symptoms of prostration, etc., occur, then the active treatment to sustain and reduce the heat of the body recommended in my last paper will be required. But when caseous transformation, as indicated by the persistence of solidifications in various parts of the lungs takes place, then we must send our patients to some other and more equable climate, where they will get well after a year or two's sojourning.

*ANNUAL ADDRESS OF THE PRESIDENT OF THE
WAYNE COUNTY MEDICAL SOCIETY—DR. J. J. MULHERON.
Published by order of the Society.*

GENTLEMEN.—Once again have we reached the end of our year, and stop at another mile stone on our journey. In the

order of business it devolves on me, in conformity to a custom which time has sanctioned, and which on all occasions except the present I have regarded as a very desirable custom to essay a few remarks in surrendering the trust committed to my keeping at our last halting place.

Allow me now to say what the confusion attending my sudden elevation to this important office then prevented me from saying, that the honor was felt to be none the less an honor because it was as unexpected as it was unsolicited. I assure you gentlemen that it is no mere platitude when I say that in accepting the position to which your suffrages elected me, I did so under a fatiguing sense of my unfitness to discharge the onerous and responsible duties which I knew were attached to the office. A comparative tyro in the profession, and carrying none of that weight which years ensure, how natural that I should be diffident and mistrustful in occupying a chair which has alike honored and been honored by men who have grown gray in the service, whose reputation has not been confined to this city or State, and whose names have been the synomyms of great professional efficiency and sterling personal worth. Your uniform courtesy and consideration, however, did much to dispel my fears and to lighten my duties, and conferred a pleasure which I could not have anticipated.

In taking the retrospect which is customary on occasions like this, I am constrained to congratulate the Society on the general harmony of its meetings, and felicitate it on the amount and nature of professional work accomplished. It is true, ripples have occasionally disturbed our placid waters, but such are necessary at times to relieve monotony (the sailor becalmed, welcomes even the hurricane), and in our case they imparted an interest which we cannot say would have been awakened without them. I venture the assertion that during the history of the society there has not been a year in which more true professional work has been accomplished. The senior medical society of Michigan, with increasing years gives promise of increasing vigor and usefulness.

From the vantage ground afforded by the chair, it is expected of the presiding officer to detect defects and suggest improvement. In the present instance no defects have been appreciable, and being thus deprived of a topic for discussion, bear with me while I offer a few thoughts on a matter which certain events of the past year have called to mind, viz: The relation which our profession should maintain towards the secular press. The question is one which I wish to refer to in far other than a controversial spirit.

The medical profession is one, which like any other whose members depend for sustenance on the patronage of the public, cannot be divested of its commercial relationships. While physicians are theoretically philanthropists, practically they are obliged to recognize the fact that charity begins at home and that a man must develop the special before he can branch out into the general. These are times especially when the man who deals exclusively in abstractions, does not only himself but his immediate dependants incalculable injury. Many of us can recall worthy gray haired men who have borne the brunt of a life long struggle, and have died with the harness on, without experiencing any of that ease which should follow a life of sacrifice to the wants of a community. They ever lived in the ideal and never recognized the fact that medicine is partly a business as well as a profession. It was formerly considered derogatory to the dignity of the profession, to present a bill and to insist, be it never so mildly, on its payment was grossly improper. Notwithstanding the conservatism of custom, however, this condition of affairs has somewhat changed, and latterly physicians have commenced to realize the fact that they as well as other laborers are worthy of their hire.

There remains a field however now relegated to interests most detrimental, not only to the profession but also the public, which might judiciously be cultivated so as to yield handsome returns to legitimate medicine—the secular press. The interests of our profession are intimately interwoven with those of the commu-

nities in which we practice and the more intimately we can unite ourselves to our patrons by all legitimate bonds, the more successful both pecuniarily and professionally will be our callings. Of these bonds none are more powerful than those of comprehension and sympathy. There is no subject on which it is easier to interest an invalid than that of medicine, but the more we mystify it, whether by technical verbiage or by surrounding it with an atmosphere of exclusiveness, the more we alienate sympathies which it is to our interests to cultivate. All mystery is unbecoming a generous culture and a great desideratum of our times is that the arcana of medicine be thrown open to inspection, that its truths be conveyed in accurate and comprehensible terms, that there be no concealment of principles, no charms nor amulets. We presume too much on the inability of the laity, to comprehend that for which they have received no special education, and while we do this we lose ground, and imposture and quackery wax strong, and bold and defiant. There are questions it is true which it is impossible to accommodate to the comprehension of minds not specially trained, but there is a vast deal in medicine, which the public can and should understand, which if properly communicated would do much towards dispelling the difficulties with which the practitioner is beset. That this knowledge should be communicated, we take to be a manifest duty inculcated in our code of ethics—a most estimable instrument and breathing throughout a spirit of genuine philanthropy. In one respect, however, unequivocal though its language apparently is, it would seem to require modification; it should be more explicit in detailing the methods in which its injunctions should be carried out. The injunctions themselves are clear. "As good citizens, it is the duty of the physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens." "They should also be ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene etc, and in regard to measures

for the prevention of epidemic or contagious diseases." "It is the duty of physicians who are frequent witnesses of the enormities committed by quackery, and the the injury to the health, and even destruction of life, caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and imposture." This language can convey but one meaning, and the only difference of opinion remains on the means through which these unmistakeable injunctions may best be carried out. On this point we say the code is silent and inasmuch as "where there is no law there is no sin" we may justly be allowed to choose our own method, as long as that is not manifestly improper. The fact that our code is silent on this point is doubtless owing to the fact that it was framed at a time when the necessity for an expression was not as urgent as it is to-day. The views then entertained and which have been largely transmitted to us, were somewhat traditional. It is impossible, however, for one age to frame a rule of action for a succeeding age. Even the Westminster catechism might be somewhat modified without detriment to religion, and of the thirtynine articles of faith several might be dropped without greatly shocking the religious sensibilities of to-day. The past twentyfive years have wrought some wondrous changes and while we have thrown overboard much antiquated nonsense, we have not yet properly retrimmed the ship for the winds and currents in which we are moving. Our methods of treating disease have been considerably modified, but fresh dangers have arisen to the community which we have adopted no special means of warding off. In regard to one evil, however, that of quackery, and patent medicines, the conviction that it should not be combatted in the most destructive manner seems to be pretty general, and the consequence is that the most exemplary physician hazards his reputation and is threatened with excommunication from all fellowship with the regular profession, should he attempt to express himself on this subject, or on any other subject, be it ever so intimately related to

the "welfare of the community" in any other channel than an orthodox medical journal—the most unlikely place in the world for the community to look for instruction. It seems to us inconsistent for a liberal profession like ours, in the midst of the varying phases of religious and political life to maintain such a conservatism of custom. "The letter killeth but the spirit giveth life." This age of all ages is one of development and progress, and change in our methods of dealing with exigencies must conform to the nature of the evil to be combatted. The quackery and imposition which threaten the "unwary" have been treated for many years on the most orthodox manner of superciliousness and contempt, and still they increase and have secured through the devices they have adopted, a hold on the popular mind which occasions by no means unwarrantable alarm. That the "welfare of the community" is imperilled by them no one will gainsay, and the question which presses for a solution is how we may best "enlighten the public and expose the injuries sustained by the unwary." To our minds the means through which their growth was nurtured, still keeps them alive and it would seem but reasonable to suppose that as affective a method as any, of dealing with them would be to deprive them of this means or failing in this, to counteract the error they promulgate, by offsetting them through the same medium with the truth, which has always been the most effectual antidote to error. That medium is the newspaper, the most powerful engine for good or evil in the land. Its influence especially in this country is incalculable. The great educator of the masses; entering alike palace and hovel, and moulding the thoughts and minds of its readers in matters of politics, education, agriculture, science, morals and largely even religion itself, why should it not be utilized in disseminating correct notions in regard to medicine? Certainly not because the subject is so sacred or the channel an ignoble one. We may affect to despise those who have monopolized this agent for their own aggrandisement, but whatever else they are or are not, they are no ill-judges of human nature, as the results of their

labors as far as they are personally concerned fully demonstrates. They fill the press with installments of their literature, contaminated and baneful, appeal to the prejudices and ignorance of the community, and suit their language to the comprehension of their readers. Having but a limited stock in trade they like other small dealers study how they may display that little to the best advantage. Dr. Cureall talks eloquently of consumption (not pulmonary tuberculosis), and describes with facile pen and fertile imagination, the direful symptoms of the hopeless malady. He illustrates with graphic cuts his column in the daily newspaper from which the rustic and not unfrequently the refined and accomplished derive their stock in trade of knowledge of their bodily structure. The writer exhibits such a profundity of learning talks so eloquently and describes symptoms with such vividness, that the reader cannot entertain the shadow of a doubt that his malady if not at once attended to will lead him to the fearful straits depicted with all the power of Dr. Cureall's portraiture, and is convinced that his only salvation lies in a bottle of the doctor's wonderful panacea, in submitting to his magic manipulations or in inhaling his world renowned medicated atmospheres. Our druggists, who by the way are so desirous of our patronage, keep constantly on their counters for distribution among their customers and our patrons, a stock of literature which teems with error and mischief to the community. The matron is supplied with the annual almanac with fun on one side and the narration of marvellous snatches from the very brink of the grave on the other; the mechanic in the circle of his family after partaking of his frugal evening meal picks up his paper, meets with a portraiture of the aches of his own body, not yet recovered from the fatigues of the day's labor, and it is not long before he is convinced that rheumatism is insidiously fastening its talons on his system. And so it is with all classes, all are constantly and persistently supplied with this pernicious reading. The philanthropists, however, brimming over with love to their race, never warn of the danger without pointing out the remedy which "may

be had at all drug stores and groceries." Who can doubt the effect which this literature has on the masses? Its influence is all pervading and knows no abatement, more deleterious than the miasm of the jungle, it is restricted by no bounds but insidiously worms its way into every abode in the land.

The question again forces itself upon us. How may we most effectually remedy the evil? We have for years treated it after the most orthodox manner, we have let it severely alone and have allowed the *vis medicatrix naturæ* to have full swing and still the mischief increases, and year by year strikes deeper and deeper its fangs into the body politic. Is it not time we adopt a different line of treatment? Expectancy has ignominiously failed, is it not time we were doing something? We have been afraid to soil our hands, or contaminate our skirts with the vile thing. We cannot, however, combat it in any such manner. We must enter the arena with it, and if need be, dignify it by treating it as our adversary. We would not ruthlessly break through customs covered with the moss of antiquity, but age of itself imparts no intrinsic virtue. The enemy has captured the mightiest agent in the land, and is pouring through it destruction not only among the people, but also into the ranks of regular medicine. Viewed from a practical standpoint, the millions of dollars invested annually in quack medicines, instead of going through their legitimate channel, build up for the charlatan and empiric princely fortunes. We have the remedy largely in our own hands. In the first place we should withdraw our support from those druggists, who sell patent medicines and afterwards learn wisdom from the enemy and turn the agent through which he has achieved his success, the public press, to his destruction. Educate the people by means of a popular medical literature, so that they may be able to know a quack at sight. Let it not be said that this is impracticable. The success which quackery has attained in educating the people to its views would be a sufficient answer to such arguments, we should not hesitate to employ the public press for this purpose, simply because it has been used for igno-

ble purposes. We cannot doubt its power and we should receive wisdom regardless of the channel conveying it. Some of the grandest truths in medicine have came to us out of the regular line. From the time of Paracelsus, the noted quack, until to-day, the "Parthian arrow from the bow of an enemy has often let in the light of truth." There was a time when disease was regarded as an entity which required to be destroyed, and drugs were depended on as the destroyer. Hahnemann arose with his dilutions, his attenuations and his other absurdities, and we saw that a respectable percentage of success followed his practice. We learned from this that certain cases would recover without drugs, and that we medicated more than was necessary; and to-day the successful practitioner, is he who is familiar with the natural history of disease, who can select his cases and knows when to interfere and when it is safe to allow nature to have her own way unmolested. In the memory of some here to-night, a persistent impostor arose, and enunciated as a great law, that "heat is life and cold is death." We may be very loathe to admit that this dogma, scarcely less absurd than that of *similia similibus*, wrought a change amounting to little less than a revolution in American practice, yet, it is none the less a fact. Thompsonianism has left its impress on other systems than that of eclecticism.

Dr. Logan president of the American Medical Association, in 1873, says: The only channels by which the people can be reached are the newspaper and the lecture room, "this is our work for the future, to educate the people." I am aware of the weight of the objection which is urged against medical men appearing in the public points. It is urged that when a physician appears in the role of instructor he appears more for the purpose of advertising himself than for any benefit he may do the people. There is some weight to such an objection, but as long as he is doing good, is it not an exhibition of selfishness on our part to question his motives? The same objection may be urged against every other good act. It is impossible to do

good by stealth—a certain amount of publicity is inevitable. Were we furthermore to discountenance, all philanthropy because of the reputation it gives the dispenser of bounties, we should work serious injury to many deserving charities, inasmuch as an analysis of the majority of philanthropic acts, would reveal, a by no means insignificant amount of selfishness. This is human nature.

The danger of medical men using this method to work themselves into notoriety might, however, be largely obviated by the society taking the matter in hand, and appointing one or several of its members to prepare such articles for the newspapers as would be of public interest, and to the enlightenment of the people. At certain seasons particular diseases are rife, and the market is flooded with "specifics," which are advertised from every spot to which it is possible to stick a poster, making our thoroughfares present a more variegated appearance than did Joseph's coat. What duty is more manifest than the physician's, at such times? A timely word from him through the family paper would prevent a vast amount of "injury to the unwary." There is, moreover, no literature more acceptable to the editors of the secular papers than timely contributions of this nature, the fact that the advertisement of quack medicines is very remunerative, to the contrary notwithstanding.

Our State Board of Health has here a field of labor, which might be cultivated to good advantage. It has already accomplished much good by stirring the authorities and the people up to a sense of the advantages of proper drainage, ventilation, school hygiene, etc., let it now aim a few blows at this pervading evil of quackery.

In conclusion, gentlemen allow me to say that the time allotted me prevents an elaboration of the views here presented. I submit them therefore without further comment, and should the society see fit to regard them, I shall be amply repaid for my efforts to awaken an interest in a subject of such vital importance.

Proceedings of Societies.

ST. JOSEPH VALLEY DISTRICT SOCIETY.

The Society was called to order at 10:30 A. M., L. C. Rose, M. D., President, in the chair.

Drs. W. F. Mason, W. F. Reiley, E. T. Bonnie, and Mrs. E. F. Anderson were admitted as members.

Dr. R. J. Haggerty was elected President for the ensuing year; Drs. Tomkins, Neal, Brow, Latta, and Fravel, Vice Presidents; Dr. Patterson Treasurer, and Dr. Pixley Secretary.

Dr. L. H. Dunning, of New Troy, Mich., reported at some length on scarlet fever. He said that while it was infectious, it was not proven that contagion was the only means of propagation, as sporadic cases occur where it is impossible to discover any means by which scarlatina was induced by either contagion or infection. He quoted Dr. Taylor as saying "that in nine instances decomposing blood was apparently the cause of the disease," and said that instances were given in which decomposing offal and washings from slaughter houses started scarlet fever *de novo*, which then spread by infection.

Susceptibility to the influence of the poison diminished rapidly after the fifth year. Dr. Dunning considered hyperæmia of the kidneys, not a complication, but a characteristic of scarlatina, as much so as the sore throat.

After making mention of the varieties of scarlatinia and the stages and describing the appearances in the throat, he called attention to the rapidity of the pulse as a valuable diagnostic symptom, saying that "excepting in the fever of puerperal women, the circulation was as rapid and soft in no other disease.

Albuminuria occurs most frequently during desquamation, although it is noticed occasionally during efflorescence. In the anginose variety the symptoms are more intense. The glands

of the neck are enormously enlarged and the temperature sometimes runs so high as to cause paralysis of the heart. After mentioning albuminuria and synovitis as sequela, the doctor enumerated the diagnostic characteristics. In the treatment he laid great stress upon hygienic measures, advocating the use of sponge baths of tepid water and alcohol $\frac{3}{4}$ i—O i. Vomiting and diarrhoea must be controlled and restlessness combatted with anodynes. Croupal symptoms should be met with free use of emetics and chlorate potassa. High temperature he would treat by means of wet sheets wrapped around the patient's body, re-applied from three to six times in ten to fifteen minutes; then place the patient quietly in bed until it was necessary to repeat. He mentioned the antipyretic use of quinia, but had had no personal experience with it in this disease. Exhaustion indicated the free use of stimulants.

In the remarks on paper Dr. Ham advised the use of inunctions of quinia gr. xx and lard $\frac{3}{4}$ i after each bath.

Dr. Rose thought emetics had been of no use in his experience in controlling the croupal symptoms.

Dr. McAllister then reported, with selected topic, Phlegmasia Dolens. His attention had lately been directed towards this disease from having two cases, the only ones he had met. One of the perplexing features in the study of this disease, is the diversity of opinion of the writers and teachers on this subject. It is most common between the fourth day and third week after delivery, but it occasionally is found in non-pregnant females and also in the male sex. It seems to occur most frequently after severe labors when the general powers are exhausted and the uterine organs have suffered by powerful and long continued expulsive efforts.

The diagnosis is usually not difficult, the symptoms being decided and characteristic. The case having progressed favorably for several days, the disease commences suddenly. The excretions are checked and probably by this means morbid material is thrown into the circulation.

The lady first complains of pain in the groin or calf, severe, continuous and increasing. Other symptoms are developed rapidly. Swelling commences usually with calf, extending upwards; skin hot and dry; urine scanty and high colored. In neither of my cases was the disease ushered in by chills or rigors. It is important to diagnose early and commence energetic treatment.

Pain as indicated is the most valuable diagnostic symptom and precedes other symptoms by twelve to twenty-four hours. The disease is not generally fatal, but is very tedious, and it may be months after the acute symptoms have subsided ere the sensations or appearances of the limb regains a normal condition. Death may result from pyæmia, embolism or the exhaustion consequent upon the long continued suppuration in the cellular tissue of the affected limb. The writer then gave the opinions entertained by several authors in regard to the pathology of milk leg, paying especial attention to the views of Dr. Robert Lee and Prof. Rokitanski. "I have no doubt that if a complete and permanent contraction of the uterus could be secured in all cases that instances of phlegmasia dolens and puerperal fever would be extremely rare." He thought it would be good practice to give ergot in every case, combined with stimulants if indicated, until satisfied that vigorous and permanent contraction of the uterus had taken place, and he thought the comfort and satisfactory convalescence experienced would amply compensate for the "after pain" induced by such treatment, and that the *practice* of giving opiates after labor was pernicious.

One of the cases I have alluded to progressed rapidly and satisfactorily, but the other presented some peculiar features. Jan. 26, called to see Mrs. G., aged 28, primipara. Had suffered pains about 24 hours, slight flow of blood, no dilatation of os. Was summoned again next day at 4 P. M., and at 10:30, after a labor which though somewhat tedious had no unusual features, she was delivered of a still-born child. Excepting slight trouble with the breasts she progressed favorably until

February 13, when she complained of pain in the left groin. Sat up that day and slept well that night. 14th, not feeling well, pain worse, moved her bowels freely with salts and senna, and gave opiates to control pain. 15th, no better; pain severe throughout the whole limb; sleepless night, notwithstanding opiates. 16th, limb much swollen; commenced midway between knee and ankle; considerable fever, tongue moist, but much coated, pain severe in calf, sleepless night. Gave enough chloral to procure sleep, and half drop of fluid ext. verat, vivide every hour; limb to be bathed every two hours in a saturated solution of camphor in olive oil, and dry heat applied by means of hop bags. 17th, more comfortable; limb greatly swollen from hip to foot; pain modified. Continue treatment. 18th and 19th same condition. Equal parts of chloral and camphor were ordered as an application, with excellent effect in soothing pain and reducing swelling. Patient improved. When on the 23d patient was decidedly better and there was a perceptible diminution in the size of the limb, ordered a pill composed of quinine and hyoscyamus a gr. j ext. ignatia and ext. aconite root a gr. $\frac{1}{4}$, morphine gr. $\frac{1}{16}$. One of these was given every two hours until lady perfectly easy, then pro re nata. This acted charmingly in soothing pain and was continued all through the tedious convalescence. During the night of the 24th was summoned to the patient and found her suffering severe, deep-seated pain in the ~~right~~ ^{left} groin. 25th, pain through nearly the whole limb, and calf beginning to enlarge. Treatment continued, with the addition of alkaline baths, and whiskey and beef essence as much as the stomach would tolerate. The course of the disease was identical with that pursued in the left limb, excepting pain not so severe. 28th, disease fully developed. From this on it slowly abated; febrile symptoms subsided, secretions improved and patient though greatly prostrated was cheerful and hopeful. This continued till March 2nd, when, at 11 P. M. was called hasty and found an alarming change had taken place: countenance pale and sunken, surface bathed

in cold perspiration, severe pain in right lumbar region, pulse 140, very weak. Gave stimulants freely and chloral. In about two hours she sank into an uneasy slumber. 3d, high fever, pulse 120, hard and sharp, skin hot and dry, tongue moist and dirty brown streak in center, bowels constipated, urine dark, and difficulty in passing it, pain and tenderness extended half across the abdomen which was swollen and tympanitic. The aspect of the patient gave most unfavorable prognosis. Veratrum was continued with addition of gelseminum, and brandy in as large quantities as could be tolerated. Beef essence no longer being of use on account of sickness induced by it, milk was administered and chlorate potash as antiseptic. R opii. gr. s s, hyd. sub. mur. gr. $\frac{1}{4}$, m. ft. pil. S 1-4 hours. Abdomen bathed freely and frequently with chloral lotion and covered with hot hops. These measures gave great relief, and until the 8th no apparent change, but on this date patient began to improve, and from this time improved steadily. Saline laxatives and diuretics, citrate of iron in wine formed the after treatment. My partner, Dr. Ham, visited the case with me frequently, and I feel indebted to him for many valuable suggestions.

The President then presented his retiring address, which was very interesting, and was loudly applauded by the Society. The President elect took the chair, and after announcing the committees for the ensuing year, the Society adjourned to meet in South Bend, Ind., on the second Tuesday in January, 1877.

C. S. PIXLEY, Secretary.

NILES, MICH., June 13, 1876.

IONIA COUNTY MEDICAL SOCIETY.

Pursuant to a call for a meeting of the physicians of Ionia County, to be held at Dr. Romig's office, Ionia, May 30th, a good representation was present and resulted in the organization of a society called the Ionia County Medical Society. Dr. Gundrum was elected chairman, and Dr. Romig secretary. A

committee, consisting of Drs. Barnes, Pray and Spalding, was appointed by the chair to draft a constitution and by-laws. After some discussion the Society adopted the constitution and by-laws as reported by the committee. On motion the chair appointed a committee on credentials, consisting of Drs. Pray, Barnes and Lincoln, who reported favorably on all present. The Society then proceeded to the election of officers for the ensuing year, and the following were elected : President, Dr. Geo. Pray ; Vice-President, Dr. F. Gundrum ; Secretary, Dr. S. V. Romig ; Treasurer, Dr. W. B. Thomas. The President appointed Drs Barnes, Spalding and Gundrum to act as a board of censors. After making appointments for the next meeting, etc., the Society adjourned to meet at Dr. Gundrum's office, Ionia, July 25, 1876.

DR. S. V. ROMIG, Secretary.

*PROCEEDINGS AT THE MEETING OF THE STATE BOARD
OF HEALTH OF MICHIGAN, JULY 11, 1876.*

There were present Dr. H. O. Hitchcock, President; Dr. R. C. Kedzie, Rev. J. G. Goodman, Dr. A. Hazlewood, and Dr. Henry B. Baker, Secretary.

There was considerable discussion over the present system of oil inspection in the State. Notwithstanding the great saving of life under the new law, the Board is not yet satisfied, but is striving for even better results. A thorough report on the subject was presented by Dr. Kedzie.

Dr. Kedzie presented a paper on "Means of Escape from Public Buildings in case of Fire." It was a strong plea for a law requiring the doors of all public buildings to open outwards; and that there should be some means of escape from each hotel room. In buildings of this character the flames generally follow the stairways and elevator openings.

Dr. Kedzie also read a paper and presented a model illustrating his new plan for ventilating railroad cars. By his method

the air is introduced free from all dust and cinders, is evenly distributed through the car in sufficient quantity without sensible draft, and at the same time the foul air is rapidly withdrawn.

By request of the Board and for the information of its members, Dr. Kedzie read a report of the meeting of the American Medical Association at Philadelphia, he having been chairman of the section on public health in that Association.

Dr. Baker presented tables and diagrams showing the death-rate under various conditions of climate, etc.

Dr. Hazlewood read a paper in which he gave facts and figures concerning the advisability and the dangers to be avoided in vaccination for the prevention of small-pox. It contained a complete history of vaccination from its discovery, and presented statistics showing the decrease in the death-rate from small-pox by means of vaccination.

S. Day, of Ann Arbor, presented a plan for a water filter, applicable to filtering water as it enters cisterns. He claimed that the action of his filter was automatic, and that because of the intermittance between storms the charcoal is enabled to renew its purifying power. He also claimed that the character of the water could be modified by the incorporation of certain materials in his filter, whereby iron, lime, etc., could be added if desired, or its freedom secured from all substances which tend to render it hard.

Dr. Baker read a report relative to a portion of the work done in the office of the Secretary since the last meeting of the Board. The report showed general progress in the work of the office. It accounted among other things for this distribution of some 2,600 copies of the Third Annual Report, about half of them to officers of local Boards of Health, and the rest to sanitarians, etc. It also mentioned the performance of a large amount of other routine and special work.

By request of an officer of the State Public School at Coldwater the Secretary, in addition to his office duties, made an examination of the Sanitary conditions of that institution, and

had carefully written out and sent to the Board of Control a detailed report of the conditions, with suggestions and advice in relation to the sanitary management of that institution. The report itself was not submitted at this meeting.

Dr. Baker presented a plan for the registration of diseases similar to that adopted by the State Board of Health of Massachusetts. This plan contemplates asking leading physicians in various parts of the State to report diseases prevailing during stated periods of time on postal card blanks furnished by the Board; also requiring such reports from the health officers of all cities in Michigan. The project was adopted.

A communication from A. A. Day, State Inspector of Illuminating oils, in reference to fees of deputies, etc., was read and placed on file.

A communication from J. T. Elliott, of Grand Rapids, relative to the unhealthfulness of decaying sidewalks, was read and referred to the Committee on Decomposing Organic Matter, etc.

A communication from L. P. Alden, of the State Public School at Coldwater, giving a detailed account of the sickness at that institution, was read and referred to the Committee on Epidemic Diseases, etc.

The Secretary announced coming meetings of prominent associations, as follows: American Science Association at Saratoga, September 5 to 8; International Medical Congress, Philadelphia, September 4 to 9, and American Public Health Association, Boston, October 3 to 6.

A valuable paper by Dr. O. Marshall, of Lansing, giving a detailed account of scarlet fever as it prevailed at North Lansing in 1875-6, was read and ordered published in the annual report. It was an important contribution to the study of this disease, containing many facts bearing upon its restriction and prevention and on the causes tending to render it malignant. It was accompanied by a carefully drawn map.

A communication from J. M. Loop, M. D., of Port Sanilac, giving details of cases of typhoid fever attributed to the use of impure water, was read.

The following were proposed as correspondents to the Board: Drs. J. M. Loop, D. Todd, N. H. Kimball, E. Batwell, O. Marshall, John P. Wilson, and Robert Johnson.

The Board then adjourned.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

THE DOINGS OF THE PUBLIC ANALYSTS OF GREAT BRITAIN.

The recent issue of the first volume of the proceedings of the Society of the Public Analysts* gives good occasion to sum up what has been done, in England, toward the municipal suppression of Adulterations in Foods and Drugs. The experience of the elder Anglo-Saxon nation in this matter is full of suggestion to those who undertake the care of the public health in this country.

It is but little over three years since efficient legal measures for the detection and prevention of adulterations went into actual operation in Great Britain. As early as 1860, there was an act of Parliament to punish adulterations of food and drink; a dead letter statute only remembered now because a later act for the same object has become a living power. The first law failed utterly, and why? It provided that competent analysts *might be* appointed by the local authorities; and in a borough where an analyst had been appointed any purchaser could make complaint before a justice, who should order an analysis if he deemed proper, the fee for the same not to be over ten shillings six pence sterling, and to be paid by the complainant if the complaint should not be sustained. Then, the article being found adulterated, it must be proved that the seller *knew the adulteration to be injurious to health*, before the case could be made out. This last named provision is sufficient to render any law against adulteration nearly or quite inoperative. It seems to say to the manufacturers and salesmen, "you are not espec-

* *Proceedings of the Society of Public Analysts*, Vol. I, London: 79, Great Tower Street, E.C. 1876.

ially required to be truthful in the designation of the articles you offer to the public but you must not intentionally poison any person. You must not sell mixtures containing fifty, seventy-five and ninety-five per cent. of starch colored with turmeric as respectively three grades of capsicum—if you are sure that such dilutions of capsicum will be injurious to health. You are forbidden knowingly to sell cinchonia pills under the name of “quinia pills” unless you hold the opinion, that the substitution is a harmless one. In case you sell phosphoric acid contaminated with arsenic, you will be in danger of fine provided you are aware of the contamination, but if you do not test the article you will not be fined, and if you have never learned how to test for arsenic you are perfectly safe.”

This inoperative law of 1860 was one result of (and perhaps a parliamentary placebo for) a popular ripple of fanciful alarm about adulterations which occurred in connection with the appointment of certain analytical commissioners and their reports to the government. A better result came from the agitation through the scientific use of these reports, an abridgement of which entered largely into the first edition of that widely circulated book, “Hassall’s Adulterations.”

In 1872, the English public were far better prepared and provided for the execution of a law against adulterations. Firstly, the long persistent efforts of the pharmacists had secured legal regulation of the practice of pharmacy and the people had accepted the results with satisfaction. Secondly, from the elevation of the profession of pharmacy and the otherwise increased number of trained analysts, it had become practicable to appoint persons who should make examinations with accuracy and good sense. Thirdly, the unprecedented activity in chemical and microscopical analysis as applied to articles in commerce since 1860, has given to skilled analysts substantial resources, as well with organic substances and organized bodies as with inorganic materials.

It was no doubt due more to the influence of scientific ex-

perts than to the sagacity of the people or the law makers that the law of 1872 was made to work, and that it was amended in 1875 to do still better work. By this law, it was an offense to adulterate foods, drinks, or drugs, or to sell such adulterated articles, with or without knowledge of the adulteration; and whether the adulteration were poisonous or inert. "An admixture fraudulently to increase weight or bulk, not declared to the consumer," was declared to be an adulteration. The appointment of analysts by the local boards was made compulsory if demanded by any person. The analysts to make quarterly reports, and to be remunerated in part by salary fixed by the local appointing power and in part by fees. Purchasers can obtain analysts by paying the fee—2s. 6d. to 10s. 6d. sterling—which is refunded if prosecution is sustained. "The Inspectors of Nuisances, or of Markets, or of Weights and Measures, shall procure samples and submit them to the analyst."

That the law has not been a dead letter is shown by a summary of the analyses made about two years after it went into effect. Fifty-nine District Analysts had made in all over 15,000 analyses, of the articles milk, tea, mustard, butter, bread, and coffee, alone. Of these, adulteration had been reported in 3794 instances; and 1542 cases of conviction had occurred. Also a considerable number of drugs had been in court. An early notable case was that of the "effervescent magnesia citrates." In spite of the protesting testimony that the majority of the consumers were familiar with the fact that the articles sold under this name contained no magnesia and more tartrate than citrate, the judges decided that it was a violation of the law to sell under a false label. Then what were all the John Bull pharmacy men to do? They grumbled, but in a very short space of time they got labels of this sort: "effervescent sodio-potassium citro-tartrate (commonly known as CITRATE OF MAGNESIA)," and not a bottle of solid "citrate of magnesia" could be bought without one of these open confessions in fresh ink upon it. Again, not being able to quote any pharmacopœial authority for the pres-

ence of large proportions of sulphate of calcium in the "Precipitated Sulphur" which was everywhere for sale (as it is in many shops in this country), they had to order and apply another penitential label: "Milk of Sulphur, commonly known as PRECIPITATED SULPHUR, but containing," etc. Some lots of quinia sulphate, a "Liquid extract of Beef, wine, brandy and quinine," and some crude vegetable drugs, were declared contraband. A "morning tonic"—37 p.c. alcohol with a little gentian and aromatics was held subject to liquor license, and cost the vender fifty pounds sterling and costs.

The Society of Public Analysts was organized in August, 1874,—all analytical chemists, but no others, being eligible to membership. At an early period they devoted their united experience to the establishment of a *definition* of adulteration and of *limits* of legitimate composition. We cannot forbear quoting these entire.

"An article shall be deemed to be *adulterated*—

A. In the case of food or drink:—

1. If it contain any ingredient which may render such article injurious to the health of the consumer.
2. If it contains any substance that sensibly increases its weight, bulk, or strength, or gives it a fictitious value, unless the amount of such substance present be due to circumstances necessarily appertaining to its collection or manufacture, or be necessary for its preservation, or unless the presence thereof be acknowledged at the time of sale.
3. If an important constituent has been wholly or in part abstracted or omitted, unless acknowledgement of the abstraction or omission be made at the time of sale.
4. If it be an imitation of, or be sold under the name of, another article.

B. In the case of drugs:—

1. If when retailed for medicinal purposes under a name recognized in the British Pharmacopoeia it be not equal in strength and purity to the standard laid down in that work.

2. If when sold under a name not recognized in the British Pharmacopoeia it differ materially from the standard laid down in approved works on Materia Medica, or the professed standard under which it is sold.

"The following shall be deemed *limits* for the respective articles referred to:—

Milk shall contain not less than 9.0 per cent., by weight, of milk solids not fat, and not less than 2.5 per cent. of butter-fat.

Skim Milk shall contain not less than 9.0 per cent., by weight, of milk solids not fat.

Butter shall contain not less than 80.0 per cent. of butter-fat.

Tea shall contain not more than 8.0 per cent. of mineral matter, calculated on the tea dried at 100° C., of which at least 3.0 per cent. shall be soluble in water, and the tea *as sold* shall yield at least 30.0 per cent. of extract [by water solution.]

Cocoa shall contain at least 20 per cent. of cocoa-fat.

Vinegar shall not contain less than 3.0 per cent of acetic acid.

The necessity of fixing "limits" is one of the gravest difficulties in the legal suppression of adulteration. This difficulty has been developed in connection with the milk trade; and may be met in dealing with many articles. It seemed unavoidable to establish a minimum standard for milk, and to make it low enough to not exclude any lot of unsophisticated milk. This standard is below the average of milk as taken from the cow. Now already the large milk dealers in English cities are systematically reducing their milk (by addition of water or removal of cream, or both) down to the legal standard. While the public are secure from the very poor milk formerly sold, they do not get what they should, the full average of natural and legitimate variations. It may become necessary that they should raise the cream standard to the true average; giving warning that poor lots of milk must be enriched by the addition of cream. Then all dealers will need to adjust their milk, and employ experts; a result not at all desirable.

Among the many good reports read and discussed before the Society of Public Analysts, was one by Dr. Dupre on the Natural Constituents of Wine, valuable because of the well known industry and ability of the author in this specialty; and notable because of some new positions. He fixes the maximum weight per cent. of alcohol in strictly natural wine at 13. This declares a very large class of "fortified wines,"—some of which, however, will come under Dupre's definition of "wine,—the fermented juice of the grape with such additions only as are essential to the stability or keeping quality of the wine."

Finally, it can justly be said that the doings of the public analysts have enriched the analytical and commercial chemistry of this generation to no small degree, as the pages of every journal devoted to chemical subjects has for some time given evidence.

Selections and Translations.

THE PATHOLOGY AND TREATMENT OF AMENORRHœA.
By JOHN C. PETERS, New York City.*

We propose to mention the remedies and the amount of experience in their favor which have been used empirically in the treatment of amenorrhœa; next, to give such explanation of their action as we can, in order that they may hereafter be used understandingly, if possible; and lastly, such physiological data about the uterus and ovaries as are necessary to the comprehension of the subject. As the last often has to come first, we will commence with the former.

There are three distinct kinds of epithelium in the female organs of generation, viz., the globular form in the ovary; the vibratile-columnar in the uterus; and lastly, the tasselated pave-

*This article, though somewhat elementary in character, is yet, as a whole, of such practical value to every physician that we publish it entire.—ED.

ment in the vagina. These epithelia are the most important elements in the physiology of these organs, and at the period of puberty (Kluss) their functions are suddenly developed. The ovarian epithelium takes the lead, and ovulation ensues ; the epithelium of the uterus next becomes very active and menstruation takes place. At each menstrual period, generally only one ovisac or Graafian follicle becomes perfectly developed, near the surface of the ovary. The ovisac swells from increase of its epithelial contents ; and is surrounded also by congestion or swelling of the central spongy portion or stroma of the ovary which forces the ovum towards the surface, where rupture of it occurs, bringing out the ovum and debris of the prolixous disc into the Fallopian tube. The latter is a movable, contractile and erectile organ, which, by the peristaltic contraction and movements of its ciliated epithelium, sweeps the ovum along into the uterus. The arrival of the ovum in the womb acts as a stimulant to the uterine epithelium, so that the ripening and fall of the ovum into the uterus coincides almost exactly with a menstrual period, viz., 28 days on an average. This periodical occurrence is also attended with molimina menstruations, viz., congestion of the spinal cord, with pains in the lumbar region and thighs as well as in the ovaries and uterus, as if widespread nervous and vascular commotion were essential previous to the monthly hemorrhage.

However this may be, according to Kolliker, at the menstrual period the whole uterus enlarges and its texture expands, from distension of its vessels and considerable infiltration of the entire organ with blood plasma. The mucous membrane really becomes thickened from 1 or 2 to even 5 or 6 lines—also softer ; and the utricular glands become well marked and easily isolated ; while numerous immature round and fusiform cells are noticed in its tissue. The blood-vessels of the mucous membrane, especially of the body and fundus become extremely numerous and

distended; more particularly the internal superficial capillary plexus, which changes the normally white or whitish red mucous membrane to a bright red color. With the escape of the blood from the superficial ruptured capillaries, the epithelium of the mucous membrane is in a great measure thrown off, or moulted, except that of the cervix; and is always to be found mixed in large quantity with the blood which fills the cavity of the uterus. After the menstrual period, the parts rapidly regain their pristine condition by contraction of the previously dilated vessels, and the epithelium is regenerated.

As before said, the uterus is lined with a vibratile columnar epithelium. This is almost immediately attached to the muscular coat, with scarcely any substratum of connective tissue, and hemorrhage easily takes place when it is removed. The epithelium is abundant, endowed with a good deal of activity, and forms, by its deep vegetations, tubular glands, which are analogous in appearance to the gastric glands and those of Lieberkuhn, and are imbedded in the muscular walls. It is remarkable, says Kluss, that this epithelium is subjected to a sort of monthly moult, exactly coincident with ovulation; and as it protects and covers the uterine muscle, which is quite vascular and even erectile, it happens that the epithelial shedding exposes a large number of little vascular canals, which burst under the influence of the general turgescence of the uterus at this moment and occasion a more or less abundant hemorrhage. Thus, though the hemorrhage is the most obvious, and seems to be the most important phenomenon, it is none the less true that the very essence of menstruation is an epithelial moult, sympathetic and coincident with the epithelial development in the ovisac, which leads to the shedding of the ova, and to ovulation. Uterine hemorrhage may occur without ovulation, and it is barely possible that menstruation may, provided the necessary epithelial changes occur.

It is not, however, to be regarded as normal, if after the menstrual period, or during it, the whole of the uterine mucous membrane, or portions of it are detached. It is the epithelium alone which should fall off. Hence the menstrual discharge consists of an abundant excretion of epithelium which is generally regarded as a secretion of mucus mingled with blood. The vaginal mucus membrane takes part in it, for at the commencement of menstruation an unusual discharge of vaginal epithelium or so-called mucous begins to take place, which soon becomes yellowish or rusty brown in color, from the admixture of a certain proportion of blood from the uterus, and by the 2d or 3d day, the discharge has the appearance of nearly pure blood.

It is generally supposed that menstruation is not merely a uterine epithelial process, but also a result of more or less vaso-motor innervation ; so that unless blood is thrown off from the uterine surface, the hemorrhagic flux may be accomplished by other and more distant mucous membranes, causing the nasal, pulmonary or intestinal hemorrhages which sometimes occur at the catamenial period. Discharges of blood from the breasts have even been noticed.

Another ingenious theory is that the uterine epithelium becomes ripe and old at the end of every month ; and although it is at its highest state of development like ripe fruit, it must now fall, or be shed. Some say that it is pushed off by active congestion of the uterus, from ovarian stimulation ; others that a sudden vaso-motor paralysis of the uterine vessels occurs ; they become distended, hemorrhage occurs, and the epithelium is washed off.

However this may be, we know that nitrite of amyl, which produces the most decided vaso-motor paralysis of any known drug, is especially dangerous if given immediately after delivery,

for it causes relaxation of the firmly contracted uterus, and may induce very alarming hemorrhage—a result to be expected from its known physiological action. Experiments are now going on with nitrite of amyl in amenorrhœa, with apparently encouraging results. It seems most indicated in a very obstinate class of cases in women with either tense fibre, or small and dense uteri, and when the ovaries also are small, firm and bloodless.

Before leaving the subject of epithelial activity, we may say that Kluss' theory of the use of bile is, that it does not take an active part in digestion, but is poured out seven or eight hours after the ingestion of food; that it speedily dissolves all cellular elements, including the blood globules, and that the greatest activity of the epithelial desquamation of the intestines, which is a daily process, takes place when the bile comes in contact with it. A chief purpose served by the bile is the removal of ripe, dead, or effete intestinal epithelium by promoting the destruction of the old cells, and by promoting the restoration of the new; by sweeping all the old intestinal epithelium, when the laborious task of absorption has been completed by it, and thus, as it were, sweeping the workshop clean after the work is done. New and fresh epithelial cells lie in the deeper portions of the epithelium, and they now come forward to accomplish their mission.

The difference between intestinal and uterine epithelium is that one dies off daily—the other only once a month; and the former has a fluid which is daily secreted to sweep it off, while the latter has none, except it be the blood at the menstrual period, or the antecedent flow of mucus which precedes the establishment of the sanguineous discharge.

Hence, in order to produce menstruation, we may have to induce ovulation, or at least epithelial growth in the ovisacs; or produce a healthy growth and decay of epithelium within the

uterus ; or at least bring about congestion of the ovaries and uterus. The peculiar action of alkalies on epithelium should not be forgotten.

Amenorrhœa may be made to include every absence of the external appearance of the menses ; but retention of the menses is not usually included in the term, although it is always necessary to establish the diagnosis. Menstruation may never make its appearance from congenital absence, atrophy, non-ovulation or other disease of the ovaries. *Congenital absence* of the ovaria cannot always be determined by physical examination, but, according to Byford, there is always such a complete absence of the signs of womanhood that we cannot long hesitate. There are no prominent mammae, the manners peculiar to females, the desire for the society of males and the sexual propensity are absent. There is no hair on the pudenda, and the whole sexual organs are not developed. The patient at mature age presents no more evidence of sexuality than the little girl ; and these signs remain permanent at all ages. As we cannot create new ovaries, this form of amenorrhœa is incurable. *Atrophy* of the ovaries has nearly the same symptoms ; it is not necessarily congenital, but may be acquired. *Non-ovulation* may be suspected when none of the pains and symptoms about the groins, loins, hypogastrium and thighs, present themselves at the monthly periods. Simple *atony* of the ovaries may be produced by mental depression, indolence, want of fresh air, or constitutional diseases, such as anæmia, general debility, absolute want of appetite, &c.

As regards treatment, there are remedies and means which will promote a discharge of blood from the uterus, as from any other organ, provided it be vascular enough ; but to produce and promote the evolution of ova, with all the phenomena of ovulation, as well as uterine hemorrhage, is a different matter. There are but few remedies, says Byford,

which are *oviferous* in their nature, or which act specifically upon the ovaries ; but we can increase their vascularity and nervous exaltation with iron, *nux vomica*, *phosphorus*, *stramonium*, *staphisagria*, *cantharides*, *damiana*, nitrite of *amyl*, &c. The muriate of gold, *clematis erecta*, *rhododendron*, and *agnus castus* have empirical reputations in producing stimulation of the ovaries, while *iodine*, *baryta*, *lead* and *conium maculatum*, are known to produce atrophy of the *mammæ*, and testicles, and probably also of the ovaries.

Acquired atrophy of the ovaries generally comes from increased growth of connective tissue, producing a state of cirrhosis like that of the liver, which compresses the ovisacs and produces atrophy of them. The muriate of ammonia and borax are supposed to be the best remedies to prevent excessive growth of connective tissue.

Amenorrhœa from absence of the uterus is not usually attended with chronic suffering, and the patients, although from 20 to 30 or more years old, may seem in perfect health. The presence or absence of the uterus may generally be determined by the introduction of the finger well up into the rectum, and a catheter deep into the bladder, and then approximating them. If the ovaries are present and active the patients may present all the external evidences of womanhood, (Byford,) such as perfect *mammæ*, *mons veneris*, *labia majora*, *clitoris* and hair. They have the demeanor of women, desire for the society of men, and may have strong sexual feeling.

When there is a partial atrophy of the uterus and ovaries, the breasts and uterus may be developed to about the size of those of a girl of ten or twelve years old ; there may be hair on the pubes, and the *mons* and *clitoris* may be well developed ; but there will be little or no sexual desire.

The treatment of a slightly developed uterus is principally

mechanical by the introduction of a sponge-tent once every week, or two weeks, or the use of Simpson's or Noeggerath's intra-uterine galvanic pessaries. According to Dr. Thomas and others, it is astonishing how much development may be obtained by a persevering use of this plan. In many instances, it will restore the uterus to nearly its normal size, and cause a return of the menstrual flow. But it often requires many months, and even some years, to accomplish this object. The use of nitrite of amyl internally to produce congestion of the uterus has been suggested.

Acquired atrophy is often confined to the uterus; while congenital atrophy may involve all the genital organs, including the breasts and nipples. Byford has met with a number of cases of acquired atrophy, generally attributable to some early miscarriage which it seemed to follow. There was hyper-involution of the organ after abortion. The above teasing processes are also required.

When amenorrhœa is caused by chronic inflammation of the uterus, there may be either condensation and atrophy, which is the most common; or the uterus is greatly enlarged, when there is more likely to be menorrhagia. This latter form of amenorrhœa from hypertrophy is apt to be associated with the most miserable states of health; the suffering, nervousness, debility and emaciation may be extreme; and the patient may be bed-ridden for months. A long course of aconite and conium, or blue-pill and conium, or bromide of potassium, or corrosive sublimate, or arsenic, are among the most useful plans of treatment.

In the mildest form of atony of the mucous membrane of the uterus, there may be a periodical discharge of mucus, or sero-mucus. The uterine congestion, or the supply of uterine capillaries is not sufficient in force or quantity to give rise to hemorrhage, but merely to cause an effusion of the thinner portions of

that fluid. Here those remedies which act specifically upon the mucous membranes, like senega, pulsatilla, borax, &c., are most useful.

After these general remarks we proceed to the consideration of those remedies for which there is most experience in the treatment of amenorrhœa. And we prefer a simple alphabetical arrangement in order that all may receive fair attention; and that the so-called lesser remedies may not be overlooked in a one-sided consideration of the more active drugs, like sabina, rue, hellebore, aloes, iron, ammonia, &c.

Aconite has been advised by some French and German physicians, especially when the disorder depends upon congestive, sub-inflammatory or rheumatic disease of the uterus. Dr. Copeland has prescribed the alcoholic extract with decided benefit, but small doses of the tincture of the root may be continued for weeks or months, and will greatly relieve the neuralgic and other congestive sufferings about the organ.

Aloes is recommended by Schoenlein, gr. x, in a small quantity of warm fluid—to be thrown into the rectum at the period when the catamenia should occur. He regards its action as more certain than that of any other emmenagogue. Ashwell has employed it thus with decided advantage; but its action is very much increased by the addition of 10 or more drops of aqua ammoniae. It is also an excellent purgative, stimulating the whole portal and uterine systems. In atonic cases, it is best given in pill form, in combination with sulphate of iron. Stille says, in imperfection or suppression of the uterine discharge without congestion of the pelvic organs [or with such as can be relieved by unloading the portal system], aloes is often useful, if taken a few days before the menstrual period. The greater the torpor of the uterine system, the more appropriate the use of aloes becomes [and then may be combined with sabina], and hence is most applicable in amenorrhœa of phlegmatic females.

In constipated females it should be used daily—1 or 2 grains, with an equal quantity of extract of sabina.

Ammonia was employed by Lavagna by injection of 10 or 12 drops into the vagina in an ounce of milk. The discharge sometimes returned in 24 hours, and sometimes not for 5 or 6 days. The injection produced an unpleasant sensation, and sometimes even pain, with a white discharge, but no further annoyance. Merat and DeLens used it successfully. It has been favorably spoken of by Drs. Blundell and Ashwell, who used 3j of liq. ammon. in a pint of milk, injected into the vagina daily. I have used the preparations of ammonia repeatedly with great success. I generally give them internally, and often prefer the aromatic spirits in doses of 3ss or 3j, several times a day. A pill of aloes and carbonate of ammonia is often still more useful, when there is atonic dyspepsia, with acidity, flatulence, constipation, great torpor and debility. I regard ammonia and some other alkalies as direct emmenagogues.

Ammonia hydrochloras is strongly recommended by Sundelin as an emmenagogue in those cases in which the disease depends upon, or is connected with inactivity of the uterus. It has been largely given for years in some of the London hospitals, with very satisfactory results, in amenorrhœa arising from functional inactivity; but I prefer it when there is enlargement of the uterus from excessive growth of connective tissue. The opinion has long prevailed that it especially affects the mucous membranes, and Bocker believes that in them it hastens very greatly the nutritive changes and the exfoliation of epithelium; and hence may promote ovulation and menstruation. In many cases of amenorrhœa and chlorosis, there is an excess of fibrin in the blood; and the muriate of ammonia, in some instances, does produce a decided decrease in the solid constituents of the blood, while it very notably increases the solids of the urine, except

uric acid, which is slightly diminished. If it fails, and more stimulation is required ; the corbanate and liquor ammoniæ will often succeed.

Apiol, the peculiar principle of the seeds of petroselinum sativum, or common parsley, obtained by treating them with alcohol at 158° to 176° F., is a yellowish oily liquid, of an acrid, piquant taste. According to Dr. Joret; it is one of the safest and best emmenagogues that can be given night and morning for 5 or 6 days before the expected period. The usual dose is gtt. xv, in capsules. It is recommended in nearly every case of excess, diminution and perversion of the vitality of the uterus, and, of course, fails in the majority of instances. Still, parsley seeds were recommended by Galen as stimulant, diuretic, emmenagogue and carminative, and Stille has found no medicine so certain in re-establishing the suspended flow, or in causing its original appearance when this has been unduly delayed, provided some indications of a menstrual nidus are present. Joret, Horrolle, Dubail and others advise it to promote the primary establishment of the menses ; to restore them when they are suspended ; and to render them abundant when they are scanty and painful and attended with pain in the pelvis, loins and thighs. They repeat that no medicine is more worthy of confidence than this. Dr. H. C. Wood thinks it about as valuable as the more ordinary essential oils ; and the action of the seeds probably resembles that of fennel, anise and coriander, and is chiefly carminative. The imported capsules contain about $\frac{1}{4}$ th of a gramme, and may be given twice a day for a week before the expected period, and every few hours if any symptoms of the menstrual molimen appear. It is supposed to be particularly useful in irregularities caused by intermittent fever.

Argenti nitrás.—In 1839, Retzius, of Stockholm, treated amenorrhœa, supposed to depend upon torpor of the uterus, by injecting a solution of lunar costic, 1 or 2 grains to the ounce,

into the cavity of the uterus just before the menstrual period. It can only act as an irritant, and the neck must be previously well dilated by sponge-tents. Dr. Lubanski speaks highly of applying the nitrate in substance lightly to the os uteri at the time of the expected appearance of the menses, and Dr. Egan also found it successful.

Arsenic was thought useful by Dr. Simpson in amenorrhœa, as well as in that peculiar affection of the bowels characterized by copious discharge of membranous shreds, and accompanied by great emaciation and a long train of neuralgic and other nervous symptoms. It is especially useful when chronic skin diseases accompany or cause the amenorrhœa. It is a useful alternative in chronic endometritis, and I have often used it successfully in such cases. It is supposed to act as decidedly upon the epithelium of the uterus as that of the skin.

Cantharides.—Dr. Dewees placed much confidence in the internal use of the tincture, in doses of gtt. xx, gradually increased to gtt. xxv or xl. If it did not succeed in these doses, he thought it would not prove ultimately successful. Its action, is somewhat similar to that of arsenic, and may be given as a stimulant, not only in torpor of the uterus, but in obstinate and chronic passive sub-acute inflammations. It is supposed by some to act only secondarily, by irritating the kidneys and urinary passages. Burdach, after the recommendation of Adair, recommended it, in combination with aloes, in amenorrhœa, especially when the suppression of the catamenia was connected with a leucorrhœal discharge from chronic endometritis. Dr. J. Murray employed it as a stimulant in amenorrhœa. In 1819, Dr. J. Klapp, of Philadelphia, published a series of 19 cases, which, he thought, demonstrated the power of cantharides to restore the suspended catamenia. He found it most useful in torpid cases, or when excessive action had been previously re-

duced by depletion. He attributed its curative effect to the irritation which it occasions in the bladder and rectum and adjacent pelvic viscera.

Chenopodium olidum, or stinking-goose-foot, has been recommended by Dr. Kreig, of Leipzig. The expressed juice of the fresh plant is only useful; the dried plant is less efficacious. Dr. Houlton also thinks that it acts directly upon the uterus. Like *assafœtida*, it is most reliable when there is hysteria or other nervous disorders. Although this plant is different from the *chenopodium anthelminticum*, or worm seed, it probably resembles it somewhat in its action. Long ago, Wilkins said that in various instances where parents have erroneously supposed worms to exist, the fine stimulating property of worm seed oil has removed general debility, indigestion and colic, with various other disorders, and restored the general health. Meigs also says that it acts beneficially upon various forms of digestive irritation, which simulate the disorders produced by worms. Ten drops are often given on sugar, before each meal, for two days, followed by a brisk purge. The oil of savin is doubtless more reliable in amenorrhœa.

Colocynth, according to Stille, like other drastic purgatives, was anciently resorted to, and is still used to promote the menses; but it is an uncertain and sometimes disagreeable remedy, and not as useful as aloes.

Cimicifuga racemosa, or black cohosh, or black snake-root, is supposed to exact a peculiar action upon the uterus, especially in the irritable condition often observed in patients for sometime after menstruation has ceased, or becomes irregular when about to cease, and marked by pain more or less periodical, in the lumbar region; it also affords rapid relief in the neuralgic pains often met with in such patients in other localities. Dr. D. A. Morse claims that is very efficient in amenorrhœa, and advises

that its use should be continued, although it fail to restore the flow at the first period—maintaining that, if persisted in for two months, a cure will rarely fail to follow. It is most useful when there are rheumatic or choreic symptoms, with profuse purulent expectoration, simulating phthisis, and when there is headache, vertigo and melancholy. Ringer recommends it when the menses are suddenly checked from cold, shock of mental emotion, with more or less severe pain in the head, back and down the legs, with stiff, sore muscles and bearing down pains. It is also said to be serviceable in that common and distressing headache occurring in nervous, hysterical women, especially at the menstrual period, with great mental disturbance almost amounting to madness.

Dover's powders, in the intense suffering which sometimes result from suddenly suppressed menstruation, is said to be most efficient by Dr. H. C. Wood, alleviating the pain and producing diaphoresis. It is often given in pills, as the powder is disagreeable to most persons. Morphine, in wine, or syrup of ipecac, is acceptable to many.

Electricity.—Dr. Golding Bird says, in this agent we possess the only direct emmenagogue with which the experience of our profession furnishes us. In young women, when menstruation has not yet appeared, and in those who have been chlorotic and anæmic, and where tonics have failed, after relieving these conditions to produce the flow, electricity is a most valuable remedy. When the catamenia have disappeared after cold, fright, or other disturbing causes, it is equally applicable; but where there is structural changes in the ovaries or uterus, it may be either useless or injurious. A rapidly interrupted primary current, as intense as can be borne, should be passed from the sacrum to the hypogastric region through and through the abdominal walls, and from the umbilicus to the perineum. These applications should be made daily through the week previous to the

menstrual periods. Of 19 cases 8 were relieved during the first month, 7 during the second, and the remainder after the third. Dr. Bird passed 10 or 12 shocks daily from the sacrum to the Pubes. Dr. H. P. Dewees regards it as certain and powerful in simple obstruction or suppression. Numerous examples of its efficacy are given by many authorities. An internal electrical treatment, consisting of alternating small doses of zinc and copper, has been suggested.

Ergot was used, says Stille, successfully by Dr. Beekman, in New York, in 1809. Dieu has succeeded in restoring the flow of menses in young girls after their suppression for many months, and when iron had failed; and Neligan states that in several cases of chlorotic amenorrhœa, he employed the infusion with most beneficial results. Ringer says it has been recommended in amenorrhœa with anæmia after the use of iron. It proved successful in the hands of Dr. Neal. Dr. Wright has repeatedly seen deranged menstrual function restored by a persistent use of ergot. There is similar testimony from Drs. Beekman and Davis; but Leutin and others assert that amenorrhœa is generally attendant on ergotism. As the principal action of ergot is to produce persistent contraction of the capillaries, and to cure hemorrhage rather than ordinary amenorrhœa, it must prove most useful when there is attendant uterine congestion, chronic sub-acute metritis and sub-involution and hypertrophy of the uterus. If it proves useful in other cases, it must act as an excitant or stimulant to torpid capillaries; or, by exciting or irritating the muscular fibre of the uterus, lead to its greater activity and growth. In this case it may be powerfully aided by *nux vomica*, which often cures amenorrhœa in feeble subjects when given alone.

Fennel is among the milder emmenagogues—supposed also to promote the secretion of milk and the lochial discharge. Galen makes the same statements, and says it is an emmenagogue.

Mitscherlich thinks it stimulates the digestive functions, and increases the renal, cutaneous and mucous secretions. Bontemps found that it acts decidedly as an emmenagogue, and if given too freely to nursing women may bring on their menses and cause their milk to subside. The decoction is made with 1 drachm of the seeds in $\frac{1}{2}$ pint of boiling water, and given in wineglassful doses. The oil is given 5 to 10 drops at a time on sugar, or suspended in some vehicle, and is the preferable form to administer it, if we expect anything from this mild remedy. It may render the oil of sabina more palatable.

Ferrum is regarded as the main remedy in anæmic and chlorotic amenorrhœa, when the composition of the blood is impaired by a partial loss of the red disks, and the energy of the nervous system and its co-ordinations deteriorated. But the mere introduction of iron into the stomach will not always suffice to make red blood globules; still, it is always a useful remedy in anæmic states, and it may, perhaps, be conducted towards the ovaries and uterus by combining it with sabina, rue, aloes, ammonia, or other decided emmenagogues. Its uses are too well known to require extended comment here. The muriate of ammonia and iron is a good combination, and borax and other alkalies increase its absorption and influence.

Gaultheria, or wintergreen, is used extensively in domestic medicine as an emmenagogue in infusion. The oil should be preferred.

Gossypii radix, or cotton root, was first introduced by Dr. Bouchelle, of Columbus, Miss., as a substitute for ergot. Dr. Shaw, of Tennessee, claimed for it very striking virtues in dysmenorrhœa and scanty menstruation, and particularly in suppression of the menses by cold. Dr. Ready, of South Carolina, corroborated the above. The decoction was preferred made by boiling 4 ounces of the inner bark of the root in a quart of water down to a pint, and given in wineglassful doses, but the fluid extract is doubtless the most reliable preparation.

Ginger is sometimes given in hot water as a sudorific and stimulant for the pain due to suddenly suppressed menstruation.

Guaiacum, as an emmenagogue, is regarded as much less stimulating than cantharides, and is believed by some to be especially useful in rheumatic dysmenorrhœa. The following formula, adopted from Dewees' emmenagogue mixture, is relied upon almost exclusively by Dr. H. C. Wood in the treatment of simple atonic amenorrhœa: R. Tinct. ferri chlordi, $\frac{3}{2}$ ij; tinct. canthardis, $\frac{3}{2}$ j; tinct. aloes, $\frac{3}{2}$ ss; tinct. guiaci ammoniat. $\frac{3}{2}$ ss; syrupi simp., ad $\frac{3}{2}$ vj. S. A tablespoonful 3 times a day. In amenorrhœa, Dr. Dewees speaks in the highest terms of the ammoniated tincture. He gave it with more confidence than other medicine, and succeeded with it where almost all other emmenagogues had failed, especially in cases of long standing. The cases most benefited by it are simple idiopathic, not dependent on organic disease. He often used purging and low diet, and persevered with the guaiac for a long time, and succeeded in restoring the menses after they had been suppressed for 1 or 3 years. It is prepared by macerating 4 ounces of the resin in a pint of aromatic spirits of ammonia, and the dose is from $\frac{3}{2}$ ss. to $\frac{3}{2}$ j. I cannot help believing that simple spirits of hartshorn, or the aromatic, will prove equally efficacious, and far more pleasant. The guaiacum may be given in pills, washed down with ammonia and water.

Hedeoma pulegioides, or common penny royal, is a stimulant aromatic, which often relieves nausea, flatulent distensions, colic; and emmenagogue virtues are also attributed to it by Stille, who says it possesses as many, if not more, than other herbs of this class. In warm infusion ($\frac{3}{2}$ j to a pint), it often succeeds in bringing on the menstrual discharge when it is delayed by temporary causes, especially by taking cold. It is given in doses of 2 or more ounces, and the oil in from 2 to 10 drops doses.

Helleborus nigri, the emmenagogue properties of which are very decided, was familiar to the ancients. Dr. Mead recommended it most highly, saying that he found in it so singular a virtue that it hardly ever failed in answering his expectations; and alleges that when it failed to restore the catamenia it produced some other discharge of blood. Stille has used it successfully, but supposes that it acts merely as a cathartic, although it is said to stimulate the abdominal organs, augment the secretions of the liver and pancreas, and promote the catamenial and hemorrhoidal discharges. The dose of the tincture is from 50 to 60 drops; of the extract, from 5 to 15 grains. Heberdeen reported unfavorably of it, but Dr. Chapman recommended it. Dr. Wood speaks of it as a purgative emmenagogue, which is now rarely employed, but I have found it very efficacious. Pereira says it is adapted for torpid, phlegmatic individuals whose pelvic circulation is languid, as it acts as a stimulant to the pelvic organs, thereby promoting the menstrual discharge, and is an emmenagogue still much valued by some practitioners, in doses of 2 teaspoonfuls of the tincture in a glass of warm water, twice a day. The Germans prefer the extract, and in amenorrhœa the tincture *martis hellebori*. I have often used it, combined with aromatic spirits of ammonia.

Juniperus sabina has long been used in amenorrhœa. Dr. Home, of Edinburgh, employed it successfully in cases unattended with fever, and in which the circulation was languid. He used the powdered leaves in doses of 20 to 60 grains twice a day. Pereira regards it as the most certain and powerful emmenagogue in the whole *Materia Medica*, and has never seen any ill effects from it. He preferred the oil in doses of 2 to 6 drops on sugar. Ringer recommends it when there is want of tone in the uterus. Dierbach says it is a heating remedy which readily causes congestion of the genital organs, and one much used in chronic affections of the uterus, suppression of the

menses; sterility, enlargement of the uterus after frequent confinements, uterine colics after numerous miscarriages, and even in commencing cancer. H. C. Wood says it is a powerful stimulant to the uterine system, which may be used in small, repeated doses in atonic amenorrhœa, and that the oil is the only preparation which should be employed. Dose, 5 to 10 drops every 3 or 4 hours. Stille says sabina is particularly called for when uterine stimulants are appropriate, for it is, perhaps, the most powerful agent of its class. Nearly all writers of enlarged experience concur in attributing very decided emmenagogue powers to it. Thus, Cullen says it shows a more powerful determination to the uterus than any other agent he employed. Vogt says it is most appropriate in cases of amenorrhœa occurring in persons of a torpid or relaxed constitution, and disposed to mucus accumulations and blenorheal discharges, and when there is a general atony of the system, and especially of the uterus, of which the capital sign is leucorrhœa, occurring exclusively or in an aggravated degree about the catamenial period. Kopp recommended it when there is a scanty discharge of dark and clotted blood with expulsive pains, and when an augmented flow takes place irregularly, ceasing and re-appearing. He often prescribed it in conjunction with borax and iron.

Millefolium, Stille says, exerts an elective influence upon the pelvic viscera that can hardly be doubted, and its most evident curative effects are manifested in uterine and hemorrhoidal affections. He decrees it to be a stimulant tonic, which, like many reputed emmenagogues, is useful in restoring the catamenia to a normal state, both when they are suppressed and scanty and when they are profuse. Although more frequently used against all sorts of hemorrhages, Voigtel says it is not less indicated when irregularity or suppression of the menses depends on debility. M. Rouzier Jolly published several cases, which prove that it is very efficient in re-establishing suppressed menses when

given at the catamenial period. Manoury found it to restore the lochial discharge, and M. Richart, of Soissons, declares it useful in relieving uterine colic in young girls at the establishment of puberty. I regard it as as little indicated in amenorrhœa as ergot, except in cases arising from congestion, or hypertrophy, which I consider rare.

Myrrh is mentioned in the Bible among the articles used in the purification of women, and as an emblem of purity and soundness. It has been used in promoting menstruation, and, in fact, has been supposed to possess a specific property in this direction. It increases the appetite and quickens the digestion, while it promotes the intestinal secretions. Amenorrhœa and scanty menstruation, when they depend upon a cold, relaxed and torpid state of the system, are benefited by it, especially when given in combination with iron, as in Griffith's mixture. It may be given in doses of from 5 to 30 grains, in pill form, or combined with aloes or guaiac. H. C. Wood says it is a tonic emmenagogue employed in atonic uterine conditions, especially valuable when chronic pulmonary complications exist. The preparations most used in amenorrhœa are the pills of iron and myrrh, pills of aloes and myrrh, and Griffith's myrrh mixture. Waring says it imparts an activity to iron and aloes which they do not possess when given singly. Dierbach recommends it.

Pulsatilla was first introduced by Storck. He found by experiments upon the healthy, and when given in amaurosis, that it was apt to bring on the menses. If not a direct emmenagogue, it acts so decidedly upon all the mucous membranes, and, among others, on that of the uterus, that it often proves useful. Singularly enough, it was adopted by Hahnemann, although it is directly antagonistic, and not at all homœopathic to amenorrhœa. It may be given in 3ss to 3j doses of the tincture, or 3 to 5 grain doses of the extract. It deserves more attention from the regular profession than it has received of late.

Rubia tinctorum (madder) has been reputed to exert a peculiarly powerful action in restoring suppressed menses. Tournefort said that it strongly provoked the menses. Dr. Francis Home pronounced it, after frequent trials, to be the strongest and safest emmenagogue with which he was acquainted, and reports 19 cases of amenorrhœa, of which 14 were cured by it. Its sensible effects were scarcely evident, although he gave it in $\frac{3}{4}$ ss or $\frac{3}{4}$ j doses of the powder 4 times a day. Ossiander, Richter and Jahn have also attested its efficacy. Dierbach says it really has a diuretic power, and is conveyed to many parts of the system, because it readily combines with albumen, casein, and especially with phosphate of lime, and may thus excite their functions. The extract is given in pills, or decoction with anise seed $\frac{3}{4}$ ss, and liquorice root $\frac{3}{4}$ ss to $\frac{3}{4}$ j of madder, in 4 lbs. of water boiled down to one half. Home found that it generally restored the menses about the 12th day after commencing its use. Drs. D. Davis and Dewees added their testimony in its favor. As it possesses no general stimulating property, it is said to be most valuable when there is great irritability of the system, with or without slight febrile paroxysms. Dr. Dewees was only successful with it when used near the expected monthly period. He ordered $\frac{3}{4}$ j, with cloves, gr. xx, in a pint of water, simmered for 15 minutes, then strained and given in $\frac{3}{4}$ ss doses every 3 hours. Pereira says the influence of madder on the general system is exceedingly slight, and its topical effects scarcely obvious, although it may possess mild tonic properties. Wood and Bache say madder was formerly thought to be emmenagogue, and was used in amenorrhœa from hepatic and visceral obstructions, and is still occasionally prescribed in suppressed menses; but physicians generally have no confidence in it in this or any other complaint.

Ruta Graveolens, or common garden rue, from the experiments

of Dr. Helie, appears to exert a direct influence on the uterus, independent of its stimulant and narcotic effects on other parts of the body. The belief in its emmenagogue properties is very ancient, being mentioned by Hippocrates. It is regarded in the East as prejudicial to the foetus if given to pregnant women, and is occasionally used in England to produce abortion. Dierbach says it is a powerful remedy, whose virtues were well known and highly prized by the ancient Greeks and Romans in irregularities and entire suspension of the menses and various chronic diseases of the uterus, especially when attended with flatulence, spasmodic vomiting, colic, diarrhoea, hysteria, epilepsy and hysterical headache. The solid extract, the confection and balsam, the latter made with equal parts of oil of rue and nutmeg, are the preparations most frequently used. H. C. Wood thinks its action is like that of savin, but less decided; and says in amenorrhœa from uterine atony and especial advantage has been claimed for the combination of the two. He thinks the oil the only proper preparation, to be given in doses of 3 to 6 drops on sugar, or on some mucilaginous vehicle. Stille says hardly any medicine was more frequently employed, or with greater confidence, than this now neglected plant. It was chiefly used by Hippocrates in uterine affections to promote the lochial discharge, and with aromatic stimulants, in amenorrhœa. Dioscorides regarded it as an emmenagogue, and gave it, with anise, in menstrual colic, and in menstrual epilepsy. Murray claims for it a high value as an anti-hysterick medicine, particularly when there is suppression of the menses, and admits its claims as of high value in menstrual epilepsy. Stille says in amenorrhœa, independent of plethora and inflammation, it becomes a powerful emmenagogue. He also recommends the oil in doses of from 1 to 6 drops, in some aromatic liquid like essence of mint, or anise, or cloves, or in mucilage, to be repeated every 4 hours. Wood and Bache report the same testimony. Pereira says it is a very

popular emmenagogue, especially in hysterical cases; while Haller compared it to assafetida; and Cullen had no doubt in asserting its anti-spasmodic powers. It formerly enjoyed great celebrity as an anti-spasmodic and emmenagogue, and still retains it among the public. Pereira thinks it will prove serviceable in amenorrhœa and hysteria, and deserves more attention than it now receives. He recommends the confection, oil and syrup of rue—the latter made with 8 or 10 drops of the oil in a few ounces of simple syrup. Dr. Geo. B. Wood reports that it is often used in domestic practice as an emmenagogue, and with some success, especially when the nervous system is also disordered, as in hysteria with amenorrhœa. The principal objection to its use is its disagreeable taste. It probably causes vaso-motor paralysis, like nitrite of amyl.

Senega was first employed in amenorrhœa by Dr. J. Harts-horne, of Philadelphia, (Stille). He used the decoction for a fortnight before each menstrual period. Dr. Chapman spoke of it as one of the most active, certain and valuable of emmenagogues. Dr. Eberle thought less of it. Dr. G. B. Wood thinks its stimulates the secretions generally, and that it is peculiarly appropriate in those cases in which a deciduous membrane is formed. It is useful when the menses are suppressed by diseases of distant organs, such as chronic bronchitis, &c. Combined with ammonia, it is said to be a remedy of great value. Pereira thinks it moderately excites the vascular system, and promotes the secretions of the kidneys, uterus and bronchial mucous membranes, with a specific influence over the nervous system. A few drops of oil of rue may be added to the syrup of senega, which is generally given in $\frac{3}{4}$ - $\frac{3}{4}$ doses; or the solid extracts of both may be given. Senega contains saponin, which, even in no greater quantity than 1 part in 1000 of water, imparts the property of foaming like soap suds when shaken; and probably dissolves both mucus and fibrin, like the alkalies.

Soda biboras, or borax, is antacid, refrigerant, diuretic and emmenagogue ; in solution it absorbs carbonic acid and dissolves fibrin, albumen, casein and uric acid ; gr. iv in $\frac{3}{4}$ of water dissolves a larger quantity of uric acid deposit than any other alkali, except lithia. It exerts a peculiar sedative and curative effect upon the mucous membranes, and promotes the absorption of fibrinous, albuminous and caseous deposits. In uterine affections, it has long been esteemed by German physicians, and was strongly introduced into British practice by Dr. Copland. Dr. Tyler Smith thinks that it is absorbed into the blood, and then acts upon the spinal cord and nerves of the uterus. It is particularly useful when there is enlargement of the uterus and ulceration of the os, with serious irritation of the bladder, and by its liquefacent properties promotes the evacuation of the menstrual fluid. It is supposed to be particularly useful in amenorrhœa, when there is a dull, earthen or pale, sallow hue of the skin, from the circulation of impoverished blood, more or less tainted with unhealthy elements, and when there are particles of chloasma uterinum on the face or chest, or an outbreak of acne, furuncles, or other skin affections. The ordinary dose in amenorrhœa is from 5 to 40 grains. According to Stille, Richter regards it as indubitable that borax possesses the power of stimulating the inert uterus, exciting its secretion, and that it deserves to be ranked with the emmenagogues. Wedel, Stark, Leutin, Hufeland, Lobstein and others recalled attention to this almost forgotten property of the medicine. They thought it indicated in scanty or suppressed menstruation connected with plethora and a morbidly sensitive condition of the nervous system, and gave it in doses of 10 to 15 grains 3 times a day. Wibner vouches for the reality of this virtue, but says that $\frac{3}{4}$ doses may bring on severe cramps in the lower belly, followed by the appearance of the menses before their regular time. Borax is only soluble in 22 parts of cold water, but by the aid of 1 of

glycerine it will dissolve in 12 of water. Glycerine will dissolve its weight of borax, but the glycerate of borax is made 1 to 4, and the honey of borax 1 to 7; but a great improvement is made by dissolving 1 part of borax and 1 of glycerine in 6 of honey. I often use it internally in uterine diseases, and think that it thus exerts the same healthy influence as it does when applied topically in other affections.

Tanacetum, or tansy, according to Stille, was used in the middle ages, and formed one of the remedies of Hildegarde for amenorrhoea and chronic affections of the abdomen. It is in popular use to overcome irregular and suppressed menstruation, especially when connected with verinal troubles. The oil is given in doses of from 1 to 4 drops. G. B. Wood says it is much more employed in domestic than in medicinal practice, but the extent to which it is used would seem to prove that it is efficacious. The testimony of many good country practitioners is not wanting to the same effect. The infusion is most relied upon, especially at the period when the menses should appear. Tansy tea is made with two ounces of the herb in a pint of boiling water, and given from $\frac{3}{4}$ to $\frac{3}{4}$ ij at a time. Wood and Bache say it has the medical properties of the aromatic bitters, especially in hysteria and amenorrhoea, but is chiefly used as an anthelmintic.

Strychnia is spoken of by Dr. Bardsley as an effectual remedy in amenorrhoea, and is supported by Dr. Copland, who, however, always used it in combination with aloes for stimulating and strengthening the uterine system.

Turpentine is recommended by H. C. Wood in absolutely passive amenorrhoea, when great local debility exists. He says if glycerine and oil of gaultheria be added to the emulsion, so that half a teaspoonful of one and 1 or 2 drops of the other be taken with each dose, the taste will be almost completely disguised. Enemata of turpentine are strongly recommended by Dr. Elliotson. He succeeded in 3 obstinate cases—one of 18 months standing—by enemata of $\frac{3}{4}$ ss of the oil in a pint of barley water, repeated once or twice a day. There was a speedy return of the menses.

BORACIC ACID AND ITS APPLICATIONS.

This chemical promises to be of no little importance in local therapeutics as a bland antiseptic.

The following is from an article in the *Lancet* by Leonard Crane, M. A., B. S., London, Consulting surgeon to the Peterborough General Infirmary :

The use of boracic acid and the different preparations containing it, has been introduced as part of the antiseptic system, and its advantages have been well dwelt upon by Professor Lister, Mr. Godlee and others. But it is as a simple dressing for wounds of all kinds, altogether apart from the antiseptic system, strictly so called, that I wish to draw attention to it.

However great the advantages of Mr. Lister's method of dressing wounds, it is undoubtedly felt by the great majority of surgeons, especially those engaged in private practice, and whose time is often limited, that the details and the time required for their proper performance practically prevent its use in all ordinary cases. In hospital practice where skilled assistance is always at hand, and in the higher class of purely surgical practice, I believe that the antiseptic mode of dressing wounds is by far the best. But we want something which, while it has to a certain extent the merits, yet is without those tedious details and which can rapidly be performed by any one without assistance.

The preparations of boracic acid have now been rather extensively tried by me for some months, and in all cases in which they have been used the results have been good and decidedly better than under the ordinary methods of dressing. The most convenient for use are boracic (boric) lint and cotton wool, a concentrated watery solution of the acid and boracic ointment. Boracic lint is prepared by soaking lint in a saturated boiling solution of the acid. On drying the lint a copious deposit of fine flaky crystals takes place between its fibres. Cotton wool may be similarly served, and when dried and carefully picked out forms a very useful dressing. The concen-

trated solution is made by dissolving the acid in boiling water to saturation. The ointment is made by rubbing down one drachm of the acid with an ounce of simple ointment or benzoated lard.

Boracic acid, unlike most antiseptic agents, is bland and unirritating ; and, whilst its non-volatility renders it less useful in some cases than carbolic acid, its great superiority to this and chloride of zinc resides in its unirritating nature. The boracic lint is best used as a dry dressing, and for recent wounds where simplicity is desired, it has no equal. A pad of lint applied immediately over the wound, and kept in place by pieces of strapping, is all that is required, and union by first intention is a common result.

For boils on the neck and elsewhere, boracic lint is an excellent application. A piece large enough to hide the boil and covered with a piece of gutta percha tissue, often gives great relief. For carbuncles and other cases in which it is desirable to apply a poultice, I have found the new "instantaneous poultice" prepared from Iceland moss by Messrs. Rigollat a capital and efficient remedy. The poultice should be prepared by soaking it for a short time in the boracic solution, and when applied should be covered with gutta percha tissue.

Lastly, in some of the vegetable parasitic diseases, such as pityriasis versicolor tinea circinata, etc., the boracic solution and ointment will often be found serviceable.

Briefly to sum up the advantages of boracic acid :

1. It is an antiseptic which does not irritate and inflame and so allows the natural process of healing to go on without much interruption.
2. It is exceedingly simple in its application and can be used apart from all the details required by a thorough antiseptic method.
3. It can be used in the shape of the lint lotion, cotton wool, etc., in combination with most other methods of treatment.
4. Its cost is trifling ; and though this is of secondary im-

portance, it is a feature of the treatment which will recommend its employment in work houses, infirmaries, and in dispensary and parish practice.—*Medical and Surgical Reporter.*

HYPODERMIC INJECTIONS OF COLD WATER FOR THE RELIEF OF PAIN.

Dr. S. H. Dessau reports seven cases in which he used hypodermic injections of water about the same temperature as that drawn from the hydrants. The first was a severe case of lumbago of three years' standing, and relieved in five minutes by the injection of ten drops of water in the lumbar region on each side. No other treatment. Pain returned in about one hour. The second case was bronchitis and rheumatism of about twenty-four hours duration. Ten drops of water injected a little above the effected joint gave relief in three minutes. The other five cases were articular rheumatism, all of which were promptly relieved by this peculiar treatment. After the pain had been subdued, treatment appropriate to each case was used.—*New York Medical Journal.*

CALOMEL IN ASCITES.

Dr. Myers reported to the Central Kentucky Medical Association at its January meeting, a case of ascites treated successfully with calomel. The patient was forty years old, mother of large family, $36\frac{1}{2}$ inches around the umbilicus, confined to her bed about five months, and had suffered for more than two years. Eight powders were prepared containing two grs. opium and numbered. To the first grs. v of Eng. calomel was added and each succeeding powder contained grs. v of calomel more than the preceding. One of these was ordered every six hours unless they induced free catharsis or great prostration. A wet compress was placed over the abdomen and renewed as occasion demanded. Solid foods, but no fluids, were permitted. At the end of the fourth day the opium was reduced to grs. i and the colomel to grs. xx every twelve hours. Tinct. of iron in ten

drop doses every hour was added and the calomel and opium decreased as the patient improved. She entirely recovered in about three months.—*Richmond and Louisville Medical Journal.*

JABORANDI AS A DIURETIC AND DIAPHORETIC IN ERUPTIVE FEVERS.

Several cases of scarlatina and of uremia from eruptive fevers, treated successfully with jaborandi were reported at the February meeting of the Medico-Chirurgical Society, Louisville, Ky. It increased both urination and perspiration very readily. There was marked decrease of albuminurea, and occasionally salivation. The results were regarded as quite favorable. One of the members had used it with the happiest results in one case of cholera infantum.—*Ibid.*

CURIOSUS VESICAL CALCULUS.

In January last, Dr. Aikins, Toronto, Ont., removed, by lithotomy, an oval-shaped calculus about three inches long by over one inch in diameter, from the bladder of a man who had suffered since the previous March. The calculus consisted of a gutta-percha pipe-stem covered with concentric layers of uric acid. It seems probable that the pipe-stem was inserted about the first of March, while the patient was in a state of deep intoxication—*Canadian Jour. Med. Science.*

NITRATE OF SODA IN DYSENTERY.

Several German physicians extol the use of nitrate of soda in dysentery. When the small intestine is involved, 60 to 100 grains are given in 24 hours. When the disease is confined to the colon and rectum, the quantity given during the day is much greater—from three to six drachms. It is given in an oily emulsion, and warm.—*Pacific Medical and Surgical Journal.*

CURE OF OPIUM HABIT.

Dr. Schwerg, N. Y., reports a case of opium habit treated successfully. The patient was a man of 47 years, and the habit was acquired by using Magendie's solution hypodermically to relieve suffering from haemorrhoids. He used the syringe himself, often four or five times a day. The man was in so deplorable a condition that it was thought best to keep him on tonics for about three months. He was then placed under constant surveillance. Valerianate of zinc and bromide of sodium, with chloroform and ether, were tried, but the patient became so restless that the solution of opium had to be used to quiet. Digitalis and verat. vir. were then tried without avail. The bromides (sodium, calcium and potass.) were then used very freely, 3xv. having been given during 24 hours. On the third day of treatment he went to sleep without opium, and slept 17½ hours. The bromides were continued as required, and the patient was sent home on the 11th day with no appetite for opium—tonics and electric baths being used. In about one week after going home he had a severe attack of acute mania, but recovered in ten days—phosphorus, cod-liver oil, brandy and milk punch being used.

ERGOT IN HÆMOPTYSIS.

Dr. J. M. Williamson (*Lancet*, November 1875,) reports fifty cases of hæmoptysis of phthisis treated with ergot, in which the hemorrhage was rapidly checked in 44—28 male and 16 female. Of the 44 successfully treated, 40 received no other medicine; two had taken gallic acid, alum, and dilute sulphuric acid, one acetate of lead and opium, and one both the gallic acid and opium without avail before the ergot was tried. The ergot was ineffectual in six cases, in three of which gallic acid also failed. The fluid extract in forty minim doses, twice during the first hour when required were used. The hypodermic method was not tried, as the action of the medicine in the ordinary way was deemed quite satisfactory.—*Canadian Journal of Medical Science.*

Ars, ante omnia veritas.

Editorial.

PHYSICIANS AND DRUGGISTS.

A question of no little practical importance is that of the relation which physicians should maintain to druggists under the generally prevalent method in which the latter conduct their business. The improvements in medicine long since necessitated the creation of pharmacy as a distinct profession, and that it has since laid the profession of medicine under deep obligations, no one will attempt to deny. Of comparatively late years, however, many irregularities have crept into the vocation of the dispensing chemist, and it has in many quarters become a question whether physicians instead of writing prescriptions for the druggist to fill, should not return to the more primitive plan of dispensing their own medicines. Certainly if it can be made to appear that the retail druggist, as he in most localities conducts his business, is one of the greatest evils against which the physician has to contend, it would be suicidal indeed for the latter to continue his patronage. That the retail druggist draws largely from the revenue of the medical profession is very susceptible of proof. To say nothing of the profits which physicians formerly made on the medicines they themselves dispensed and which they have turned over to the druggist, the latter receives many a fee which legitimately should find its way into the physician's purse; and in many instances where the fee does not go to the druggist the physician is deprived of it through the sale of some patented nostrum.

Under the existing condition of affairs physicians act largely as feeders to the druggists' mills. They undergo the vicissitudes of weather and subject themselves to manifold sacrifices of ease and convenience without remuneration, while the druggist who fills the prescription must have his cash in hand before he delivers the medicine. It frequently happens that the physician

after a long attendance on a patient, when he presents his bill, is told that all the money there was in the house has been given the druggist and that he must wait; and too often the hope of receiving his fee is deferred until the heart is made sick.

The great sin, however, of which druggists are too often guilty, is the abuse of the trust and confidence reposed in them by the physician, and this consists not only in their repeating prescriptions without the instruction of the physician, but also in actually treating other patients with the combinations recommended by the physician in a given case. This evil obtains largely in the case of specific venereal diseases. It is now in this city a comparatively rare occurrence for a physician to meet with a case of gonorrhœa, for instance; not because there is less of this trouble than formerly, but largely because of the fact that almost every druggist prides himself on his ability to treat it successfully, and does so with formulæ prescribed originally by some physician who has been his patron.

The legitimate work of the druggist is to dispense according to the prescription of the physician, and as long as he confines himself to this he should receive countenance and support; when, however, as is done in the vast majority of instances, he assumes the office of physician, that countenance and support should be withdrawn. Physicians in good standing, moreover, are supposed to be governed by the Code of Ethics of the American Medical Association and a conformity to the requirements of this instrument would necessitate a withdrawal of their patronage from every druggist in this city with, perhaps, one or two honorable exceptions. The code especially declares it to be the duty of physicians "to exercise their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture.

To say nothing of the thousands which are lost to physicians every year through the twofold office of physician and dispenser assumed by our druggists, the public is made to suffer incal-

culable injury through the sale of patented medicines. The only remedy, and one which many of our physicians are adopting, to remedy the evil is for physicians to restore the prescription case to their offices and to keep thereon only the standard preparations of the pharmacopœia. By this means the druggists would be made to recognize that physicians have rights which they are bound to respect if they would share their patronage.

*METEOROLOGICAL REPORT for June, C. HENRI LEONARD, M. D.,
Observer for STATE BOARD OF HEALTH.*

BAROMETER.—Highest, 30.049; lowest, 29.506; range, 0.543; average, 29.863.

TEMPERATURE.—Highest, 88; lowest, 50; range, 38; average, 69.3. It will be noticed that the highest given is not as high by several degrees as that read from several reliable thermometers at our jewelry houses; this difference is owing to the fact that the latter were exposed to the *reflected heat rays from the pavements*, although not exposed to the sun. The temperature I give is the exact temperature of the air. In '72, the average temperature was 68.3; in '73, 69.3; in '74, 68.9; in '75, 67.2; hence, the month has been somewhat warmer than the average.

WINDS.—Greatest velocity, 30 miles per hour; on one observation, at 7 a. m., of the 22nd, there was an absolute calm, the first instance so far this year. At a good many observations the velocity has not been above 4 miles per hour. Prevailing direction was S. W., and the total number of miles "travelled," 4,643; considerable less than in the months of either May or April.

CLOUDS.—There were but three clear days; 12 cloudy ones and 17 rainy ones; a gain of three pleasant days over last month.

RAINFALL.—Greatest daily amount, .25 of an inch; this was on the 17th. Total amount of precipitation, only .51 inches. I have repeatedly heard this month spoken of as a "wet month," when, on the contrary, it has been the *dryest* month we have had in years; we have had hardly half as much rainfall as in any of the 4 preceding Junes; farther than that our observations do not extend. Our records show that this June has *less* than one-half the precipitation last; *less* than one-third that of June of '74; of about one-fourth that of June of '73; and two-thirds that of June '72. We had a rainfall last month that in a single hour measured as much as this whole month taken together.

MOISTURE.—This has been very abundant, showing a corresponding increase with the temperature. The maximum amount was 7.95 grains to each cubic foot of air; this was on the afternoon of the 26th. The prevailing amount has been in the neighborhood of 6 grains to each cubic foot. We had no rainfall on the day of the greatest saturation. At nine other observations the amount was 7 grains, or above, to each cubic foot of air.

OZONE.—Present on 25 days; a falling off of 4 days from last month, in conformity to the ozone chart of Prof. Kedzie, of last year's observations. On 4 of these days there was only a "trace" found. The maximum coloration was 2; this was on the 25th., a day of no rainfall, and was reached at both the morning and afternoon observation.

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PUERPERAL CONVULSIONS—A Paper read before the St. Clair, Sanilac and Lapeer Medical Society. By C. M. STOCKWELL, M. D., Port Huron, Mich.

Of this most formidable disease Cazeaux says: "Among the various convulsive diseases that may appear during pregnancy, parturition, or lying in, there is one which has such well marked characteristics, and whose physiognomy is so peculiar, that I can scarcely comprehend the want of accuracy that still exists in most classic works on the subject." Meigs says: "It is of a nature so dreadful that we might reasonably suppose it to have been the object of much attention and of most careful study, for it ought to awaken in the mind everywhere, a strong desire to know and fully understand its principles and cure; nevertheless the thousands of examples of the disorder that have been observed and studied, have left us even in this enlightened age, with great differences of opinion concerning its nature, causes

and treatment." With such declarations, by men of acknowledged eminence in the profession, before us, we proceed to the study and exposition of Puerperal convulsions with no little hesitation and misgiving. Offering this as our apology, "In a multitude of counsel there is safety."

To a brief analysis of views propounded by prominent writers on this subject, first of causation and pathology, and last of treatment, we will append our small note of individual observation, thought and experience, with the hope of inviting a more critical and personal investigation and observation, and such expression of results as shall conduce to mutual professional progress.

Of cause, Barnes in his Lumlian Lectures states the following propositions :

- 1st. Pregnancy and labor require for their due fulfilment an extraordinary supply of nerve force.
- 2d. This extraordinary supply of nerve force implies a corresponding organic developement of the spinal cord.
- 3d. The provision of an extraordinary supply of nerve force implies a greatly augmented irritability of the nervous centres, rendering them more susceptible to emotional and peripheral impressions.
- 4th. The disturbance in nutrition occasioned by pregnancy, almost always entails some alteration of the blood, which increases the irritability of the nervous centres and favors the evacuation of any latent convulsive or other nervous diathesis as chorea, epilepsy, or vomiting.
- 5th. Where the blood change wrought by pregnancy is marked by albuminuria a poisonous action of peculiar intensity is exerted upon the nervous centres tending to produce eclampsia.
- 6th. Obstinate vomiting in pregnancy probably sometimes proves fatal, by the development of an organic or systemic morbid process.
- 7th. Menstruation resembles pregnancy in giving rise to an exalted nervous erethism ; and ovulation is a primary exciting cause of epileptic, vomitive and hysterical convulsions.

8th. At the climacteric age again there is a renewed susceptibility to convulsive diseases.

9th. Pregnancy by evoking or producing convulsive diseases, under certain known and passing conditions puts to the test the various theories of the pathogeny of these diseases.

10th. The rational treatment of these diseases in women must take into account the two great factors in the production of these diseases, viz: an exalted nervous irritability under the stimulus of the reproductive functions and a lowered or empoisoned condition of the blood.

Physiological dissections and vivisections made by Schoff, Flourens, Hartwig, and Marshall Hall have fully established the fact that when the lobes of the cerebrum and cerebellum are both removed, convulsions may be occasioned to any extent by irritation of the cranial terminates of the spinal marrow. Marshall Hall found that while irritation of the brain proper of a dog produced no convulsive action, pinching the dura mater lining the cranium, to which branches of the 5th pair are distributed, did excite convulsion. (Tyler Smith Braithwaite's Retrospect, Part II., p. 223). A fact thus established by such authority, we naturally look to spinal irritation (not to the irritation of brain substance except in small degree to a portion of its membrane) either direct or reflex as the true source whence convulsions arise. In support of, and in confirmatory evidence of the propositions quoted and the conclusions arrived at, by the experiment alluded to, and as well of exalted nervous irritability, we further quote from foot notes in Ramsbotham's Obstetrics, p. 27, in which that author expresses his belief that this affection, eclampsia, originates most frequently in some deranged state of the uterus itself, probably in its nervous system and consists in some irritation propagated from that organ to the brain. He says that he has met with some cases that strongly impressed him with the idea just expressed, the most striking of which are the following: He was called by one of the midwives of the Royal Maternity Charity, to the assistance of a

woman under puerperal convulsions toward the close of pregnancy. She had been bled largely by a medical friend before his arrival ; the bleeding had relieved her partially, but it was thought right to repeat it. A third quantity of blood was taken sometime after with such beneficial effect that the convulsions entirely ceased, and in a few hours consciousness had gradually returned.

About fifty hours after this attack active labor came on ; and in less than five hours the child was born—dead. The placenta did not descend and two hours subsequent to the expulsion of the child he was again summoned. He found the patient perfectly sensible, in good spirits and making no complaint. There had been no hemorrhage, the uterus was not strongly contracted, and the placenta was still retained entirely within it. Under no greater anxiety, he says, than he usually feels when the placenta is retained, he proceeded in the ordinary way to remove it. The moment he had passed his hand completely into the uterine cavity the patient turned upon her abdomen and without uttering any expression of pain went into a convulsion, though not of a severe kind ; intense coma supervened which yielded to no treatment that he could devise and terminated fatally in about two hours from the removal of the placenta. Forty-eight hours after death he reports having made an accurate inspection of the body. The dura mater, though adhering a trifle more firmly than usual to the inner surface of the cranium, was healthy in appearance ; the vessels of the brain contained less blood than ordinary ; the plexus choroides was quite blanched ; there was no fluid in the lateral ventricles ; none between the membranes at the upper part of the skull, but about two drachms at the base of the brain ; no extravasation of blood existed in any part of the cerebral mass. The viscera were *all* healthy ; the uterus was well contracted, nor did it present any uncommon appearance. This, he goes on to state, was as clear a case as can possibly be made out, of irritation propagated immediately from the uterus to the brain, and he had no doubt that if the

placenta had not unfortunately been adherent, but thrown off naturally, the woman would have recovered perfectly. Two other similar cases, not quite so strong he says, subsequently came under his observation. He then relates a case from Ingleby of a patient who had had no convulsion before delivery. He says, "an esteemed friend once found it necessary to pass his hand into the uterus for the purpose of removing an adherent placenta, the ergot of rye having been previously administered. The introduction was very carefully performed. The straining and opposition to his efforts on the part of the woman were exceedingly great; and at the moment when the operator's hand had reached the organ, Ingleby's hand making counter pressure on the abdomen, the patient became violently convulsed, and died in less than a minute."

Here were patients suffering from no appreciable lesion, (unless the two drachms of fluid found at the base of the brain be deemed such) convulsed fatally from by no means an uncommon or unwarranted irritation of the uterus.

The reflex action had induced entire suspension of the functions of nerves of organic life.

Dr. Tyler Smith (Braithwaite, part XI., p. 224), says: "Labor is a function of the excito-motor system, and the true puerperal convulsion can only occur when the central organ of this system, the spinal marrow, has been acted upon by an excited condition of an important class of the incident nerves, namely, those passing from the uterine organs to the spinal marrow, such excitement depending on pregnancy, labor, or the puerperal state. While the spinal marrow remains under the influence of either of these stimuli, convulsions may arise from two series of causes—of those acting primarily on the spinal marrow, or centric causes, and secondly those affecting the extremities of its incitant nerves—causes of eccentric or peripheral origin.

This proposition is advanced in opposition to the admitted general opinion, that they are the result of cerebral congestion, as advanced by Gouch, Churchill, Powell and many others, and

accepted by a considerable portion of the profession of to-day as I think will be evident to any one taking pains to obtain individual opinions of theory and treatment.

Dr. Cormack, of Westminster, England, holds that a very close connection exists between renal congestion and puerperal convulsions, that—though not always, yet generally—they (puerperal convulsions) are the toxicological results of non-elimination of the excretion of the blood, depending in many—far the greater number of cases—upon renal congestion, caused by the pressure of the gravid uterus on the renal veins, while the medical profession of to-day largely claim this toxæmic poison to be albumen. He also attributes it to excrementitious matter from the foetus and from the elements of milk. Bedford, in his work on "Diseases of Women and Children," p. 473, queries if this toxæmic poison may not be kiestein, uneliminated. This not only, in his view, produces convulsions, but also various other distressing symptoms manifested during pregnancy, as excessive vomiting, a salivation that sometimes occurs, and the various neuralgic pains often so intractable. The suppression of the lochia often, in his view, develops convulsions, and these occurring post partum he thinks indicates either such suppression or structural renal disease. Tyler Smith sustains this view and states that "it is difficult to estimate too highly the influence of impurity of the blood as a direct *irritant* of the nervous centres in pregnancy." He then enumerates "pressure of gravid uterus on the intestinal canal causing constipation, pressure upon emulgent veins causing albuminuria and retention of urea in the blood, pressure upon hepatic vessels often producing pink deposits in urine, and lastly, pressure upon the thoracic viscera, causing deficient oxygenation of the blood as sources of such impurity." But, he adds, "While all these toxæmic causes exist, certain vicarious or complimentary secretions are set up which tend to preserve the blood in a healthy state—sickness and vomiting, the salivation that sometimes occurs, increased action of the glands of the axilla and skin generally, and the

secretion of milk in the mammae during the latter months often occur, especially in cases of albuminuria, are all in a measure, as doubtless intended to be largely, compensatory in their action. The foetus also, he recognizes as an excretion, as that which would otherwise be effete, goes to form liquor amnii, membranes, bones, etc. However, in his view, only intense toxæmia—as in poisoning by carbonic acid—produces convulsions depending solely upon the state of the blood (Braithwaite, pp. 20, 197).

After stating that this “disease is unlike apoplexy, because in common apoplexy we seldom have the convulsive fits,” especially oft repeated, with intervals of perfect quiet and consciousness, and seldom or never is paralysis produced as a consequence of puerperal convulsions, Ramsbotham goes on to state (p. 425) that the most usual proximate cause is *probably* pressure on the brain; this pressure being sometimes produced by the rupture of a vessel causing a sudden effusion of blood, sometimes by serous exudation into the ventricles or between the membranes. Sometimes (p. 427)—and for the most frequently—by simple congestion of the cerebra vessels themselves.” Yet he says the disease has often proved fatal, without any organic lesion being evident on dissection, and without even the vessels being observed to be preternaturally full. He then asserts that in this respect, also, there is a strong analogy between apoplexy and puerperal convulsions, quoting Bruscic, Korheim and Abernethy as having recognized a species of apoplexy to which they applied the name *nervous*, because no distinct lesion was discoverable: Churchill also recognizes this fact, (Dis. of Fem., p. 458) for in speaking of the pathology of this disease he says, “In a majority of cases a *post mortem* examination affords but little information. In many instances there is no alteration whatever from the healthy state of the brain. He then cites Bouteilloux, La Chapelle, Cruvehier, Boudelocque, Cinselli, Callens, etc., as having proved the fact; moreover, he states that sometimes the vessels of the brain are turgid with blood, and in other cases there is a quantity of serum effused on the surface and base of

the brain, or into the ventricles ; occasionally, also, fluid is found in the pleura and pericardium to which latter with equal force the convulsions might be referred.

An obstetrician of Swaffham, England, Dr. Rose, gives a lucid (?) statement of the cause : according to *his* belief "a peculiar state of the nervous system." Few doubt the fact, while none recognize in that the intelligent observation that commands a more extended investigation of his observation either of cause or treatment.

Another writer states that true puerperal convulsions partake both of the nature of epilepsy and apoplexy, and may be considered as apoplexy with violent spasmodic paroxysms super added, the latter being occasioned by the great degree of nervous excitability to which all pregnant and parturient females are liable. He then enumerates as causes, plethora, compression of aorta, long continued mental excitement, and highly electrical condition of atmosphere and persistent damp foggy weather.

Meigs in this relation says, "all women are more or less influenced in sickness and health by the nature and forces of their generative sphere—an influence best expressed by the word hysteria. Pregnant women are far more under this influence than others as it is greatly developed by the processes of gestation and parturition. This sur-nervous excitement he claims to be independent of any change of the blood or nutrition of the brain or nervous system ; he regards it is an organismal influence, pure and simple, and that it has no other name than hysteria, that hysteria is the fundamental principle of this disorder, and that to it we ought to attribute every sort of child-bed convulsions. Coupled with this he admits its mechanical changes due to altered position of the varied abdominal viscera from increased size and increased demands of the gravid uterus. Sometimes these mechanical changes induce altered secretion in organs wrought upon by them ; thus we may have albumenuria from undue disturbance of hepatic and renal functions, that the moment the mechanical pressure is relieved is readily corrected by the simple unaided forces of nature.

It is a noticeable fact that a very large percentage of puerperal convulsions occur in primipara, and a majority of these are of firm flesh, that is the muscular structures are in good tone and in active condition. The soft flabby women are rarely subjects of convulsive seizures; hence eminent authority (Meigs) puts this condition of abdominal muscles, holding firmly the enlarged and enlarging uterus against the abdominal viscera; in time by such pressure interfering with normal intestinal action, inducing thereby large faecal accumulations in the colon, that again in turn exerts a serious pressure upon mesenteric, renal and crural veins interfering with free return of blood through them, and inducing consequent congestion or engorgement of the cortical portion of the kidney (the first stage of the so-called Brights disease), and elimination by that organ of albumen as the primary cause of puerperal convulsions. By a large class of writers, prominent among whom Levis as quoted by Churchill, this agent—albumen—is earnestly charged with their causation, but another class nearly as large assert the contrary.

Churchill quotes, Levis of London, as saying that “having carefully examined the urine of every woman attacked by convulsions for a long period of time, that had come under his notice both in the Lying-in Charity of Guy’s Hospital, and his private practice, he has detected albumen in every case but one at the time of the convulsions, and moreover that he had examined the urine of upwards of 50 women, and the result has been that in no cases had he detected albumen except in those in which there had been convulsions, or in which symptoms have presented which are readily recognized as precursors of puerperal fits (Churchill Mid. pg. 451). Cazeaux, after having encountered a large number of cases that exhibited the presence of albumen in the urine, at once concluded that he had discovered “that which had escaped the notice of older observers, and hence believed it to be the dominant fact in the etiology of puerperal convulsions.” We more fully quote Cazeaux, page 716, “since albuminuria is present in the immense majority of

eclamptic women, it, or rather the disease of which it is a symptom, may be rightfully regarded as the predisposing cause of eclamptic convulsions."

While this is the avowed experience of the writer quoted, many other equally reliable observers, have in large numbers of convulsed women sought vainly for this agent. Meigs (Woman and Her Diseases pp. 666), says: "you will find from Bright in 83 cases of Bright's Disease there were only five cases of convulsions, and that Dr. Imbert Goubeyer found from different authority that in 164 observations of albuminuria in pregnancy, 94 of them had convulsions; that 65 pregnant women with albuminuria had no eclampsia, and that five women had eclampsia, although they had no albumen whatever. Personal observation of twenty cases during a practice of twenty-five years in which tests were made of one-half the cases, gave albumen in only two; of those one was anaemic and oedematous, and was recognized as a probable case of Bright's Disease before the test was made. It, as expected, proved fatal. In this case the kidney disease was not dependent upon the pregnancy.

If albuminuria be the true cause of these convulsions, why do so large a percent of cases in which this substance is found escape convulsions? Is it not proof that a cause more deeply hidden than this discovered principle is the true one? Just here we would invite attention to the fact that while many refer to uræmic poisoning as the true cause, there seems much disagreement as to what constitutes uræmic poisoning. Albuminuria co-existing with well marked cases of uræmic poisoning, and accompanying convulsions, and being an element easily revealed by the simplest chemical analysis, has been charged with being the real poisonous element expressed as uræmia. Later investigators, among whom are Frerics, Brown-Sequard, Becquerel, Claude Bernard, Lyman, Carpenter, Beyer, Gebourt and Brown, claim that this poison is carbonate of ammonia circulating in the blood; that has there been developed through decomposition of condensed urea by the presence of a ferment as yet unknown,

and they report experiments made by injecting this agent—carbonate of ammonia—into the veins of dogs, convulsions universally being produced. In support of this proposition, several of these physiologists have shown with Bright and Goubeuyer that albumen exists in abundance in a large number of puerperal as in other cases without the development of even a tendency to convulsions.

Blot reports, as noticed in "The Maternity of Paris," 41 cases of albuminuria only seven of whom were at any period convulsed; others make the ratio of convulsions occurring in cases exhibiting albuminous urine, as one to ten. (See Robert's *Urinary and Renal Diseases*, page 290).

Meigs (*Woman and Her Diseases*, pg. 661), speaking of albumen as the essential cause of convulsions, enters into a careful comparative computation of the amount of albumen discharged in an individual case of convulsions through the kidney in three days time and showed that the amount equalled that ordinarily contained in five eggs equal to $1\frac{2}{3}$ eggs per day. He then humorously proceeds to say that "a poor little chicken will often give an egg per diem for nine or ten months of the year and still keep fat and fit for the table with no exhibition of convulsibility. By successive haemorrhage also one may habitually lose an equal amount and still no convulsion supervene; hence to charge upon such trifling waste of albumen results so momentous and fearful unless such results are found universal or nearly so, to the cool careful observer would seem preposterous.

This author having thus disposed of albuminuria as a cause, attributes these convulsions to a "peculiar state of the system dependent upon the parturient state," which, following the views of Wiegand he terms *convulsibility*, and thus speaks of this condition in explanation of the term used, "whether we advert to the changed susceptibility of the pregnant woman which develops a state closely allied to the hysterical condition, or whether we consider the extreme violence with which the blood

of a woman in labor rushes along the arteries of the encephalon, we must admit that the brain cannot but be in an excited state and prompt to exert its powers in such a manner as to convulse the whole or part of the muscular system; the activity of the cerebro-spinal system is always proportioned to the quantity and impetus of the blood circulating in the vessels, and every woman in labor whose pulse becomes hard, frequent and violent, ought to be held liable to be convulsed by the neurosity extricated in consequence of such a circulation." While without much actual experience we could readily admit the condition Meig's terms "*convulsibility*," and reasoning to conclusions based upon the apparent condition of women in the throes of labor, expect a large proportion, if not all, cases of puerperal convulsions to arise in the second stage, our experience thus far proves the larger per cent., indeed we may say all cases, with one single exception, that were not suspiciously hysterical, originated either previous to apparent entrance even upon the first stage, during this stage or subsequent to the completion of labor. Post partum cases have varied in period of accession of convulsions from four to sixteen days after completion of labor.

With this great diversity of opinion concerning the etiology of this formidable malady, it especially behooves every practitioner to exercise the greatest care in the investigation of every case coming under his observation; that he analyze with great care and method, and that he never allow himself—as without doubt has too often been the case—to become so absorbed in the present condition as to forget that the condition may possibly be due to other than puerperal causes.

True, in our zeal to develop cause, we may not delay active efforts for relief as is related of a pupil of the celebrated Louis, who had so thoroughly been taught *method* by his instructor as to do nothing without first recording; when called to reduce a fractured leg, accordingly he took out his note book and recorded name, age, date and ancestral troubles of the sufferer, and in obedience to rule asked "were your parents, grand

parents, uncles or aunts subject to broken legs or arms?" Such precision may doubtless be a little too formal for such an occasion, and for good practical results; yet in all the history of the disease under consideration, it is painfully evident the error has been in an opposite direction, that opinions and conclusions have been formed much too hastily, and under circumscribed examination upon which have been based lines of treatment affording very unsatisfactory results. Immediate condition and prior history should be critically examined that approximate dependence may be determined, and that remedies may be directed to cause rather than effect.

After having examined in detail the various theories of pathology and cause of convulsions, occurring in the puerperal state, we find ourselves far from being qualified to speak ~~with~~ the confidence of Cazeaux, as having "discovered that ~~which~~ had escaped the notice of older observers," yet are compelled to assert the conviction that judgments have in the main been formed far too hastily, and without the careful analysis such maladies demand. Their onset is usually so fierce, so unexpected, and attended with such painful and horrifying developments that a cool and critical analysis on the occasion would seem almost heartless. Yet in other cases, nearly if not equally as trying, the medical man is expected to scan the different steps of disease with very great care and to form an opinion on not one or two, but a multitude of cases presenting analogous features. A convolution occurring in a non-puerperal individual would be closely investigated as to the real cause; if form and habit indicate an apoplectic condition, and especially if unconscious state be prolonged on the subsidence of the convulsions, the fit would be pronounced apoplectic, especially if the victim be florid and full blooded and if form and age present favoring condition. If history revealed the fact that convulsive seizures had previously been known, or that she had suffered from injury of spine or of skull likely to produce depression of inner table and irritation of that portion of the dura mater supplied by nerves of the fifth

pair, or if the seizure should be accompanied with frothing of the mouth, the peculiar whistling respiration and biting and chewing of the tongue, incident to an epileptic seizure then it would very properly be deemed epileptic. If of excitable temperament possessing little self control, the fits succeeded or preceded by emotional outbursts, then, especially in the earlier months of pregnancy, or when suffering from the various new experiences of a first pregnancy, very properly it would be ranked as hysterical. But the emotions in our belief are far more potent in the production of this most formidable disease, than is generally credited, and should far more frequently be closely interrogated than seems to have been done by most investigators.

No ~~medical~~ man but what has been made painfully conscious of the ~~power~~ that depressing emotions exercise in arresting the process of assimilation and digestion. Is it not possible in the excited condition of the nervous system, (erethism, you may term it), consequent upon her changed condition, that depressing emotion may be greatly exaggerated when the woman reaches that state, always approached with more or less fear and dread, her confinement, and finally prove the simple explosive, that needs only a touch, a shock it may be, such as the manipulation mentioned by Ramsbotham, that all unexpected shall develope a fatal convulsion, two or three cases have presented themselves that forcibly impress this fact upon the mind:

1st. The wife—as supposed of a tailor that had but a few months been a resident of our city, was found in labor and violently convulsed. A medical friend had been in attendance several hours; had bled her freely with no alleviation of convulsion or inducing any change unless that of making the coma more profound. The pulse was soft, no puffiness of extremities or of the face, other than we would expect as the result of the convulsion. The os was well dilated, and the pains of labor well marked, tests of urine gave no traces of albumen. The labor was encouraged with all practical speed; chloroform was admin-

istered, but with no relief of the convulsions. At length the labor was completed and the secundines expelled; uterine contractions were normal, yet with no returning consciousness, and in two hours after completion of labor, death came to her relief. The medical attendant resided just across the street from the patient and had remarked upon the unusually happy life, the pair had seemed to pass together until one or two days anterior to her illness. We subsequently learned that the man had another wife living of which until this time she had been in ignorance.

Another case of like character, indeed, almost the exact counterpart of this just given, only that convulsions did not set in until nearly a week subsequent to a very comfortable confinement; the date of their accession being immediately after receiving information that she had been deceived and that she was not the true wife. Another convulsion supervened upon subacute cellulitis and co-incident with development of pyæmia, two weeks and two days subsequent to confinement.

As may well be supposed, a disease whose pathology is so imperfectly understood, and whose cause has been referred to such varied conditions must be subject to great variety of treatment, for pathology and cause are true indices to appropriate remedial measures. Cerebral lesions or active congestion of any important organ being the supposed cause, abstraction of blood in greater or lesser quantities may be admissible. On this hypothesis depletion has been indiscriminately urged and evidently in a great majority of cases has been pressed to the greatest extremes with little or no idea of application of physiological principles. Often this course has accidentally resulted in manifest relief; but too often we are compelled to believe, has been productive of a fatal issue.

Thus, Denham relates that a patient was bled freely with no apparent relief; the convulsions continued, but during a subsequent fit, the bandage slipped from the arm and a great quantity of blood was lost and the convulsion ceased. Giving us no further light as to the character of the fit, upon this single case

he bases the conclusion that copious bleeding is the important and only reliable remedy and advises that fifty, sixty, or seventy ounces of blood be cautiously taken away. Methinks should one of us, instead of the renowned Denham, hazard a theory of treatment upon such trifling experience, we would justly receive very caustic criticism.

Hamilton advises the abstraction of forty ounces of blood, and if in two hours the patient is not relieved, the abstraction of forty ounces more. Gooch, with characteristic egotism, relates that a little woman aged 18, of spare habit, was seized with pain in the head and with trembling, when she fell down convulsed. This, he says, was the first case he had ever seen and thought the patient was not plethoric ; he bled her to the amount of twenty ounces ; before the bleeding ceased she opened her eyes and the convulsions were suspended. This was followed with cold applications to the head, sulphate of magnesia and infusion of senna every three hours, until the bowels were well evacuated. Notwithstanding the favorable impression from the bleeding and after purgation, the convulsions shortly returned, when the bandage slipped from the arm and she lost eight ounces more. In haste the husband ran for him, and immediately he abstracted twenty ounces more, when the convulsions ceased but the patient remained insensible. He ordered a continuance of "Black Draught." At ten o'clock at night, after having lost in the twelve hours previous forty-eight ounces of blood, she still remained much the same. He now bled her thirty ounces ; the convulsions ceased, and in the morning she was decidedly better. In the course of the day labor-pains supervened and she was delivered of a dead child, and gradually recovered. In neither of the cases just cited, is any intimation given as to the *rationale* of the heroic treatment adopted.

As an instance of a class of cases, emotional in character, that by one considered of sufficient professional standing to receive an appointment as physician to an important hospital in England, we will relate a case as reported by Dr. Woodhouse of

“The Royal Berkshire Hospital.” This case occurred post partum, as the Doctor relates, in consequence of a trifling indiscretion in diet, and also some little disappointment in being unable to procure the nurse she had engaged, for one week later than the actual occurrence of the confinement. He admits that she was subject to hysterical paroxysms, and says that he found her convulsed, and the epigastrium enormously distended with gas. The convulsions were so fearfully severe that the friends and attendants believed her dying yet, he says he could find no other source whence these symptoms could arise than the irritation of the stomach from a *cup of chocolate* and a *Bath bun*. He concludes that copious emesis is demanded to remove the offending bun, so administered sulph. zinc, ipecac, calomel and salts, all in rapid succession, but without relief. This treatment occupied a period of nearly four hours. At length a “happy thought” suggested itself, and a mixture of castor oil and turpentine was prepared and administered in teaspoonful doses. The first teaspoonful, says this sage Doctor, had scarcely been swallowed, “when the machinery of relief was set in motion, the bowels were copiously relaxed, volumes of flatus were expelled; her face brightened up and consciousness so far returned as to offer resistance to the remainder of her potion. She had no more convulsions and finally recovered. Such is the history of a case published in Braithwaite’s Retrospect, part XXXIV., p. 236. This was a hysterical case with a hysterical history, suffering from disappointment and therefore quite naturally should have been considered emotional; but instead, a little chocolate and a bun were charged with the mischief. Heroic remedies were administered, but the reason of including calomel among them is to our mind unappreciable. From the peroration indulged in after the administration of the teaspoonful of castor oil mixture, we are led to conclude that this writer attributes all the relief gained to this simple mixture. How is it possible that a man of intelligence can arrive at any other conclusion than that this was **done other than a hysterical convulsion occurring in connection**

with her puerperal condition, and which required little save judicious antispasmodics, possibly trifling stimulation and cold douche to head and face, with addition of mild laxative?

That cases of apoplectic tendencies may require the free use of the lancet; that a distended colon may urgently require removal of its contents, that retention of urine may induce convulsions that will be most effectually relieved by the use of the catheter is absolutely certain, but that every case must be bled, physicked, or catheterized is not established. Rather that in administration of remedies or the use of mechanical help, good common sense and ordinary judgment instead of routine is to guide and direct the medical practitioner.

An epileptic suffering from convulsions at the puerperal period must be treated as an epileptic, perhaps more rigorously and rapidly because the condition is more liable to an early fatal issue than if not thus complicated. Bromide of potassium and bromide of ammonium may be freely administered after being satisfied that the colon is not excessively distended with hardened faeces, or its evacuation secured. These failing in speedy control, the addition of gelsemium may still further allay the cerebro-spinal irritation. The paroxysms still continuing severe and of frequent recurrence the inhalation of a few drops of nitrite of amyl gives promise of temporary relief.

If convulsions result from emotional causes, other than hysterical, or from uterine or vesical irritation, reflex in character, the bromides and gelsemium may be used with advantage, which failing the use of choral or anæsthetics promises favorable results.

Forcible dilatation of the uterus and delivery, though very largely advocated in this class of cases is of very doubtful utility as liable to aggravate the already irritable condition. If dilatation has been accomplished and pains are inefficient, the use of forceps as abbreviating the period of greatest irritation is eminently proper, but turning and craniotomy simply for the purpose of bringing the labor to a speedy termination is justly

reprehensible, notwithstanding their frequent advocacy and their having been favorably adopted. In cases exhibiting marked albuminous or other toxæmic poison Dr. Golding Bird advocates, and Meigs endorses, the administration of benzoic acid and Bi-carbonate of potass, four grains of the former, fifteen grains of the latter, every third, sixth or eighth hour, according to the severity and frequency of the convulsions. In such cases anaesthetics may be used oftentimes with profit, but requires extreme caution in their administration.

Without classification, and empirically, tinct. verat viride has been recommended and administered in doses varying from three drops to a teaspoonful; one case came under notice in which the larger quantity was administered with no alleviation of the convulsions.

A friend, now deceased, of Oneida county, N. Y., was in the habit of administering ergot freely, in table spoonful doses of the etherial extract, with, as he claimed, happy results; this was done empirically. Dr. Hitchcock, of Kalamazoo, in an essay read before the Wayne County Medical Society and published in the October number of the *Peninsular Journal of Medicine*, 1874, advocated the free use of ergot and stated that since he and Dr. Mottram, also of Kalamazoo, had adopted the use of the ergot, neither had lost a case. The theory of its action as propounded by them is that the physiological action of ergot is upon the unstriped muscular fibre to produce tonicity and contraction therein, and that its therapeutic action is chiefly upon the unstriped muscular fibre as found in the coats of the blood vessels. Dr. H. claims that ergot has the power of lowering the pulse from ten to seventeen beats per minute as demonstrated by experiments of Porole, and Quinton Gibbon. He states also that upon this ground Dr. Brown Sequard has proposed the administration of this agent in spinal paralysis dependent on chronic myelitis. Convulsions arising from local congestions quite likely might be greatly modified by the action of this remedy. We have administered it in puerperal convulsions for the

purpose of accomplishing a more speedy delivery, with no alleviation of the convulsion, but have had no opportunity of testing its action since attention has been directed to this supposed influence.

Results in a single case were deeply impressed upon the mind and led to the query, if powerful counter irritants remotely applied, might not in many cases with propriety take precedence of all other treatment. The case was a partially hemiplegic patient, found suffering from powerful puerperal convulsions. The hemiplegia had existed a number of years and had, as stated, supervened upon a severe attack of typhoid fever. An examination revealed labor just commencing, os beginning to dilate. The convulsion was co incident with a labor pain. The patient was very spare; no oedema, but the extremities were very cold. Coma was profound, at least no indications of consciousness could be obtained. For the want of anything better at hand a small Dover's powder was administered, more with the purpose of inducing relaxation than anything else, and the feet being cold a hot iron was ordered to them. The progress of labor was encouraged as rapidly as possible. Chloroform was sent for and being received just as the labor was about completed, but one inhalation was given and the labor was accomplished. The convulsions ceased, but the patient, still unconscious, seemed very nervous. An eighth of a grain of morphine was administered after the expulsion of the placenta. No more convulsions occurring the patient was left in quiet. Next day, consciousness had not returned, neither had she been convulsed since confinement. On the second day, consciousness returning, complaint was made of soreness of one leg. On examinations the whole impress of the sad iron was found burned into the calf of the leg. The revulsive effect must have been great, yet it had been utterly impossible to restrain her during the convulsions, the limbs being sometimes drawn close to the body and again extended, with great violence, to their utmost.

Having observed with some care, and investigated with some

zeal, we are forced to the conclusion that the only sure road to success in the treatment of puerperal convulsions lies not in treatment of the paroxysm but on the prophylaxis.

Eight years or more have elapsed without a single case of puerperal convulsions having come under notice, although indications of such an issue have been frequent. Among these are frequent paroxysmal cephalalgia, tinnitus aurium, giddiness, excessive nervousness, constipation, abdominal soreness, etc.

Every engorgement is closely watched and inquired after, and any of these symptoms presenting are appropriately met and the convulsion averted. The headache is especially a symptom demanding attention. This may be relieved by enemata or mild laxatives combined with a nerve tonic as *nux vomica* and *quinia* or bark, together with bromides or iodides as seem with the individual case most appropriate. Of course the secretions of the kidney may be closely looked after and any uterine or vaginal irritation relieved by *lotio nigra* or other mild soothing lotion, or suppositories of iodoform.

ECLAMPSIA. A paper read before the Wayne County Medical Society.

By W. H. Rouse, M.D., Detroit.

There are few people in civil life who require more self-possession and discriminating judgment than the physician. His avocation often brings him into direct contact with cases that require immediate and judicious action. There is no time to consult either books or friends. Of the many causes of suffering and death there are few that induce greater excitement and alarm of the friends, or require more self-possession and ready knowledge in the physician, than eclampsia. This disease is most common in children of tender age, and not infrequently attacks the pet of the family. Its onset is often unsuspected till the short, sharp shriek of the sufferer in the stillness of night summons the friends to witness the convulsed and frightful appearance of their unconscious darling. All is excitement and

alarm, except the physician, who, being hastily called, is expected to act with the utmost coolness and discrimination, and by his actions say to the perturbed household, " peace, be still."

DEFINITION.—Eclampsia is any disease in which involuntary, clonic contractions of some or all of the voluntary muscles constitutes a prominent feature. As there are various diseases analogous to this, any one of which may at times more or less modify its symptoms, it is not strange that various definitions have been given, none of which, however, are free from objection. The convulsive movements which constitute so prominent a part of this ailment, are but the expressions of derangement in some other part of the system. Yet, while this is true, it seems to require a nervous system of peculiar susceptibility for the full development of eclampsia; for a trifling irritation of the stomach, from change of food, for instance, may induce violent convulsions in one child, while gastritis, obstinate constipation, etc., seems to have no such tendency in another.

CAUSES.—Since the convulsive movements are but the outward manifestations of some internal or remote irritation or disease, it has been found convenient to classify the causes under different heads, according to the location or source of the irritant that induces them. For convenience, I will adopt the following classification :

The Cause of Convulsions may be	1. Predisposing.	1. Age. 2. Temperament. 3. Hereditary tendency. 1. Essential, Idiopathic or Emotional. 2. Centric or Symptomatic. 3. Eccentric or Sympathetic.
	2. Exciting.	

1. Of the predisposing causes, age is probably the most prolific. This probably arises from the rapid development of the nervous system during the first few years of the child's life—the convulsions being comparatively rare after the eighth year.

2. As convulsions arise through nervous conditions, the more susceptible the nervous system, the greater will be the probabilities of eclampsia from any given cause. Some children are so

excitable that comparatively trifling causes may induce uncontrollable actions. This cause is closely allied to

3. The hereditary tendencies which seem to play an important part in inducing this disease. Some families hardly know what convulsions are, while others, from their frequent recurrence in nearly every child, probably for several generations, seem to become somewhat accustomed to their recurrence, and look for them as others would for falls while the child is learning to walk.

(a.) About two months ago I was called to see a child in convulsions in a large family. This was the only case that had been observed by the parents, either in their own family or in those of their relatives. These children, eight in number, have usually been healthy, but not remarkably strong.

(b.) I saw another case in another family several months before this. The general appearance of the children was far superior to that of the preceding, but convulsions were common—one had died, and nearly every member of the family had suffered from eclampsia.

4. Essential, idiopathic, or emotional convulsions are those in which post mortem examinations can detect no pathological condition that could act as an exciting cause, and in which the clinical history points directly to mental emotion strongly excited. I have never seen such a case. Authors report them, but I presume they are comparatively rare.

5. Centric, or symptomatic convulsions, are those in which the clinical history and post mortem examination, when admissible, indicate that they arise from disease in the brain, spinal cord, or their membranes. They are the most fatal, and may arise from inflammation, pressure, plethora, anæmia, as from excessive hæmorrhage, exhausting diseases, etc., rupture of blood vessels, or from any other cause which directly interferes with the action of these organs. In most cases the child has been

fretful for some time, but not so ill as to excite alarm. It may have been placed in bed at night in apparently better health than usual, but before morning the parents are aroused by the short, sharp shriek of their child. It is found in convulsions, the pupils are strongly contracted or dilated and insensitive to light; the eyes appear prominent and staring. If relief is not soon obtained, the child dies.

About two years ago I saw a child of about three years of age, which had retired in good health and spirits, according to the report obtained from the friends, but they had observed considerable irritability for a day or two previously. About two in the morning the peculiar shriek of children with cerebral disease awoke the family. The child was in convulsions. I was in attendance in a short time and believing it to be a grave case, asked and obtained assistance. The usual treatment was adopted, but the child died in about six hours. Similar cases are too frequent to require further illustration.

6. Eccentric or sympathetic convulsions are those in which the clinical history and post-mortem examination indicate that the cause is in some other part of the body than the cerebro-spinal system, as in the case of centric convulsions. These are by far the most common, and their sources might be called legion, for they are many. Irritation in almost any part of the body may induce them. The mere mention of some of the most frequent causes must suffice. In the alimentary canal might be mentioned dentition, unusual, irritating, undigested or indigestible food, worms, inflammation, or in fact, any disease or other cause that induces irritation of the nerves distributed to these parts. I have seen but few cases from dentition. Improper food has in my practice been quite common. Constipation is not an unusual cause.

I saw a boy of five years of age some time ago in very violent

convulsions from constipation. Defecation was induced by enema, and the child at once recovered.

Disease of the respiratory organs not unfrequently induces convulsions in susceptible children. Renal difficulties from uræmia, or calculi, renal or vesicle, is quite common especially after eruptive fevers. Irritation of the cutaneous textures, especially extensive burns, is another source of this trouble, and the eruptive fevers should not be overlooked. A few years ago a little girl was taken with convulsions, and in about twelve hours died with some symptoms which induced a suspicion of scarlatina. Another member of the family was soon after similarly affected and also died, and a third had scarlet fever, which still further confirmsd the belief that both of the preceding had been affected with that disease, but did not rally from the onset of the attack.

It seems a little remarkable that peripheric irritation of the nerves should induce similar convulsive movements as disease of the brain itself, and that these movements should bear so marked a resemblance to the muscular contractions induced by an irregularly interrupted current of electricity. It is held that muscular contractions are induced through nervous influence, and, by some, that this influence is transmitted by means of a certain fluid. May not the phenomena—coma and involuntary clonic muscular contractions—of convulsions be induced by impressions or influences, whether centric or otherwise, which in some way, not yet demonstrated, impede or interrupt the flow of this nervous fluid, in some way analogous to the interruption of the electric current in a galvanic battery? The impression on the nerve centres must be profound, and the symptoms we observe in eclampsia are possibly the results of the strenuous efforts of the brain to duly execute the orders it receives.

DURATION.—Convulsions usually last from a few minutes to

several hours, and they may recur an indefinite number of times in quick succession. I saw a patient about six weeks ago who had two convulsions of about half an hour each, followed by another of three hours duration. The last was interrupted by medicine, and the patient recovered. The child may remain comatose for a considerable time after the spasmodic movements cease.

PROGNOSIS.—The gravity of convulsions depends upon their cause, violence and duration. Of idiopathic and eccentric causes many will recover, unless the exciting cause be very violent or one that cannot be readily removed, as in some cases of eruptive fevers, extensive burns, acute inflammation, etc. When the cause is centric, the prognosis should be given with great caution.

SYMPTOMS.—The symptoms of this ailment are so familiar that I will not detain you with any description, but will proceed at once to the important point, the

TREATMENT.—For convenience of description the treatment might be considered under three heads, viz : 1. Pre-convulsive; 2. Convulsive, and 3, Post-convulsive stages.

The pre-convulsive and post-convulsive stages require similar treatment. As the disease depends upon so many causes, the physician should manage each case upon general principles—each and every ailment that probably acts or may act as an exciting cause should receive careful attention and appropriate treatment. The post-convulsive treatment should also be such as to remove the effects of the convulsions and guard against their return.

In the convulsive stage much skill and ingenuity are required; yet, fortunately, very similar treatment is indicated in all varieties of eclampsia. It is usual to recommend a hot bath as the first and best remedy. In eccentric cases I have found them very useful, but in centric, I have seen the convulsions become

very much aggravated by such a bath. I have observed similar results from cold applications to the head. In one case some time ago, when I had great faith in the hot foot, and cold head bath, I used these applications several times, till I became thoroughly convinced that neither the one nor both combined could do more than aggravate the symptoms. There was probably lesion in the encephalon. The child died, but no *post-mortem* was permitted to confirm the diagnosis.

The bowels should receive very early attention. If the child can swallow, medicine may be given by the mouth, if not, per rectum will do. As the child can seldom swallow, the bowels should be moved by one or more enemata containing turpentine. This will often relieve the convulsions and coma as if by magic. I have seen children recover with very little other treatment. About four years ago a patient had recurrence of convulsions for about twelve hours. The physician in attendance had used warm baths and medicine internally with very little apparent benefit. At last, a lady friend suggested an enema; this was used; the bowels acted, the child became quiet, and had no return of the trouble. Green grapes which were observed in the dejections were probably the cause of the trouble.

After the bowels have acted I usually, use chloral hydrate with or without potassic bromide, per rectum, or by the mouth at regular intervals as may be required to control the spasmodic action. Other medicines, as belladonna, opium if there be no cerebral complication, valerian, etc., may produce happy results in suitable cases.

I have occasionally used chloroform and ether by inhalation, but unless in very mild cases I have not been pleased with the results. They are too liable to embarrass the respiration, and possibly thereby do more harm than good.

Rubifacients to the stomach, bowels, extremities, back, etc., or even vesication with hot water and turpentine are often

valuable adjuvants. I have often thought that these applications are too extensively used. They may produce marked irritation over considerable surface, and in that way furnish, as in cases of burns, a new exciting cause, instead of acting as a controlling remedy.

Leeches to the head and pressure on the carotid arteries have been very highly recommended in congestion of the brain. I have not had occasion to use them sufficiently to warrant an expression of opinion, but they should be very valuable in such cases.

The bromides are very much used for quieting the nervous system, and in some cases act remarkably well, but I prefer using them to quiet when there are no convulsions, either before they come on or after they have subsided that they may not again appear. In such cases they are very valuable and may be combined with belladonna, ergot, or other remedies suitable to the case.

So soon as convenient after the active stage is over, a cathartic should be given. This should be selected according to circumstances, but in most cases calomel is the best. In many cases castor oil and turpentine would be preferred. That which will produce the desired action with the least irritation is usually the one to be preferred.

Whenever the cause of eclampsia is known, remedies should be selected—other things being equal—with especial reference to the removal of the exciting cause.

Though eclampsia is a disease that causes considerable excitement and apprehension, most patients, unless there be severe organic lesion, or some incurable ailment, will recover. Many children have wonderful recuperative powers. Some of the most hopeless cases may recover. Therefore, the physicians should not be too easily discouraged.

The great excitement and strong anxiety of the friends on

these occasions may induce the attending physician to apply many local applications, or to administer a great variety of remedies in the hope of appeasing ; but such vacillation, though it may elicit sufficient commendation from the by-standers to fan the vanity of the doctor, can be of no service to the child. As the accomplished general about to enter a battle surveys the ground before marshalling his batallions, so the educated physician should carefully diagnose his case, fully decide upon the course of treatment, and modify it only as circumstances may require.

Ophthalmology and Otology.

THE STUDY OF THE OPHTHALMOSCOPE. By R. J. PEARCE,
M. D., *House Surgeon, University Hospital, Ann Arbor.*

The difficulties encountered by every student in the practical study of the ophthalmoscope are so great as to be probably the main cause for the general lack of knowledge which prevails on the subject of ophthalmic medicine. But few pages of any work on diseases of the eye can be read without being reminded of the frequent necessity of the ophthalmoscope in diagnosis, and the cases are not numerous in which an examination can be considered complete without its assistance. A knowledge of these facts confronts the student at the outstart of his studies, and he endeavors to shape them accordingly. Having thoroughly studied the ophthalmoscope theoretically, he attempts its practical use, but finds after earnest and repeated effort that little or no progress is made. Becoming thoroughly disgusted, the ophthalmoscope, and with it ophthalmic medicine, is laid aside, and those who talk of seeing arteries and veins, optic disc and yellow spot, of distinguishing between diseases of the different layers of the retina, of diagnosing glaucoma by the

condition of the optic disc, and many other such wonderful things, are thought to be drawing considerably upon their imagination, or to possess uncommon faculties which especially adapt them for their work. Now this is a wrong impression, for those who understand the instrument and can make practical use of it, have, as a rule, no special genius, but only excel somewhat in a higher quality, namely, perseverance.

Not a little may sometimes be done by those who have surmounted difficulties in levelling the way for others who may be following in the same path, and it is with this hope that the present article is written.

By comparison of the complex with the more simple of things which are fundamentally alike, study is frequently facilitated. In the present case this is possible. The ophthalmoscope belongs to a class of instruments called specula, which have but one thing in common, namely, the power to illuminate dark cavities and passages by reflected light. To this are added other contrivances which adapt the instrument to different purposes, and increase its usefulness. For study, three of the class will be sufficient, namely, the vaginal speculum, the otoscope and the ophthalmoscope, whose complexity increases in the order named. For vaginal examination, in addition to the reflection, some means of dilating the passage is required, the walls of the canal otherwise remaining in contact. A tube is used for this purpose, or some modification of a tube, the inner surface of which is made to reflect light strongly. The passage being dilatable, the instrument may be made of such calibre as to admit of enough diffuse light for all practical purposes; and the parts to be examined not being minute, the eye of the examiner need not approach so closely as to cast the shadow of the head upon the instrument. Though, no doubt, a concave mirror would add to the illuminating power of this speculum, yet as it would render its use more complicated without proportionately increasing its usefulness, this addition has not been made; and the vaginal speculum in its tubular form remains the most simple of its class,

and best illustrates the fundamental principal common to all. Now, to the vaginal speculum, (modified in size to suit the ear), if we make the addition of the reflecting disc we have an ear speculum or otoscope. The external meatus being surrounded by a bony wall is undilatable, and being small, sufficient diffuse light is not admitted for the close examination of parts which are minute. Moreover, the observers head, being in necessarily close proximity to the instrument, obstructs the light. The use of the disc reflector obviates these difficulties by reflecting concentrated light into the cavity and by enabling the observer to place his eye in the centre of the emerging rays. Thus, so far, we have the reflector as the essential thing in both these instruments, and, as auxiliary, the tube, which serves either to dilate or to straighten the passage, according to its design, and thus to facilitate the examination.

In the examination of the eye, though of all examinations the most difficult, we fall back to the elementary form of the speculum, namely, the reflector. Practically the tube is not here necessary, though virtually we are not without its assistance, for by the intraocular pressure the walls of the organ are kept in the most favorable condition for our purpose, which substitutes the use of the tube.

There is therefore really no essential difference between the ophthalmoscope and a vaginal or ear speculum. But in the specular examination of the eye we encounter the optic lens, which adds a feature to the case not before met with. But suppose that in the use of the other instruments we desire to increase the size of any object under observation, we have but to use such a lens as that of the eye, holding it at its focal distance from the object, and the resemblance is again restored. Now, any intelligent physician would be competent to make such an examination at a moment's notice, but when he makes the attempt upon the eye it is found a difficult matter; a new and very troublesome element has to be dealt with in the power of the lens to oscillate in its focal condition between the extremes of

the range of accommodation. What does common sense teach us to do in this case? It is very obvious that if the ocular lens can be placed in the same physical condition as the lens used as mentioned in the other examinations, we ought to encounter no greater difficulties, excepting those which arise from the unsteadiness of the eye while under the glare of the reflector, and the minuteness of the aperture through which the observer must look. To so arrange the patient's lens, he has but to look at some distant object in the room, in other words, to fully relax his accommodation. The lens being adjusted at its focal distance from the retina, the rays emanating from it will be parallel, which only requires that the observer's eye should be in the same condition to receive them, when the details of one retina will be transmitted to the other and be pictured upon it in an erect image.

Such are the general resemblances of all specula, indicating clearly that so far as they are alike their management is similar and equally easy, and that the difficulties in the use of the ophthalmoscope arise not from any peculiar complexity of the instrument but from that of the organ for whose examination it is intended. These, as already mentioned are mainly the unsteadiness of the focal adjustment and the uneasiness of the eye and smallness of the pupil under the glare of light, and they can only be overcome by studying them carefully and acquiring expertness with reference to them, by repeated practice in the use of the ophthalmoscope. No more can we expect success in our first attempt at ophthalmoscopic examination than the child can in walking or the boy in swimming. Perseverance gives the only assurance of success, for earnest effort is seldom seen to go without a crown.

The following described little contrivance, which can be made in an hour without any expense, to one who already has an ophthalmoscope, will be found a most valuable aid to the study of that instrument, being in fact an artificial eye, whose parts are at our command and may be arranged in a variety of ways so as to produce all the conditions found in the eye, as nearly, at least,

as an artificial can resemble an organic structure. A cylinder of cardboard two inches long, and one and one-half in diameter is first to be made, and then two covers, one for each end of this. One cover must have a ring of one and one-half inch in depth; the other one-half inch, so that when both are on the cylinder they will cover it completely. The shallow cover is to be used as the top; the other is the bottom of the instrument. In the top cover make a central aperture about the size of the natural pupil, and ream its edge with some polished substance till it is smooth and free from projecting fibres. In the top end of the cylinder, about one-eighth inch from the edge fasten a diaphragm, also perforated. This opening must be one inch in diameter. Now place some fine print in the bottom and a two-inch lens between the top and diaphragm and the instrument is complete and ready for use, in all respects as an eye would be in ophthalmoscopic examination. The depth of the rim of the bottom cover enables the student to adjust the instrument for lenses of different powers by drawing it out, and in the same manner to produce the condition which so puzzles the student when observing in the erect image an eye adjusted for some point short of infinity. The lens, being adjusted for a point beyond its focal distance from the print, the rays diverging from the object will emerge from the lens in a converging direction, and being thus received by an emmetropic eye adjusted for parallel rays, must meet in the vitreous and form circles of diffusion upon the retina, giving rise to one of the difficulties which the learner so often encounters and knows so little how to explain and remedy. Another advantage of this instrument which is not of least importance, is that it is always at our command and may be studied at times when persons can not be found willing to submit.

Having now shown that the ophthalmoscope is a simple instrument to manage and understand, and also pointed out when and what the difficulties in ophthalmoscopic examinations are, and having suggested a means by which to facilitate the study of this instrument and these difficulties, I hope I have done something to encourage and assist those who may be interested in understanding diseases of the eye.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

COMPARISON OF FOUR PROCESSES FOR THE MORPHIOMETRIC ASSAY OF OPIUM. By JAMES LYNN, Ph. C.*

Four samples of opium, obtained at different reputable pharmacies, were each assayed by the four processes. The opium was dried, to lose no more weight, at 100° C.

PERCENTAGES OBTAINED.

	No. 1.	No. 2.	No. 3.	No. 4.
1. Proctor's Staples' process, ¹	11.22	13.62	9.14	12.69
2. Mohr's process, ²	11.40	13.48	9.30	12.77
3. Hager's Jacobson's process, ³	11.68	13.86	9.46	12.98
4. Dragendorf's Mayer's process, ⁴	12.33	14.00	10.40	13.06

Of the three *gravimetric methods*, Staples' gives much the purest and best crystallized morphia, being nearly colorless and readily detached and gathered. For this reason Staples' is preferred by the operator to Mohr's or Hager's method, unless time is an

* "Contributions from the School of Pharmacy of the University of Michigan, communicated by Prof. A. B. Prescott." Taken from AMER. JOUR. PHAR. for August, 1876, p. 358.

¹ "Proc. Am. Phar. Assso." 1870, p. 129; "Am. Jour. Phar." 1871, p. 655 (first method given by Procter). The plan of the U. S. P. preparation of morphia.

² "Annal. der. Chem. u. Phar." B. 35, S. 120; "U. S. Dispensatory." Third method given by Procter, as above quoted.

³ "Hager's Untersuchungen," II, 176; "Am. Jour. Phar." 1871, p. 224. Founded on Mohr's.

⁴ The Volumetric Method. Mayer, "Am. Jour. Phar." 1863, p. 20; Dragendorff, "Werthbestimmung starkwirkender Drogen," p. 86. This method was employed as follows: Three grams dried powdered opium were exhausted with benzene, the adhering benzene fully evaporated, the dry powder macerated in water for 12 hours, then percolated on a filter with water until the water passed colorless. The dilute percolate acidulated with sulphuric acid, and the reagent added from the burette in portions so limited as to prevent excess, allowing the precipitate to subside after each addition. At intervals, a drop of the clear supernatant liquid is taken on a dark colored glass slide, with a drop of reagent from the burette, this portion being rinsed into the tested solution each time until the addition is completed. Each c.c. of a solution of 13.546 grams mercuric chloride and 49.8 grams potassium iodide in water to one litre, precipitates 0.02 grams morphia.

important object. Hager's is the quickest and simplest, being completed in four to six hours, while the product is about as pure as Mohr's; the crystals from both these methods being imperfect and colored. The yield is greater in Hager's than in Staples' process, but very likely the amount of absolute morphia is not much greater.

In any gravimetric method the morphia separates by crystallization slowly, and, we must suppose, approximately, and that a weighable proportion of morphia remains in the mother liquors of the gravimetric processes is strongly supported by the results of the volumetric method. Here weighable portions of the alkaloid do not escape determination, and no non-alkaloidal matter obtains determination. Other alkaloids, however, may be included, notwithstanding the use of benzine. Also, the *execution* of the volumetric process may suffer appreciable variations. At any rate, it must be held that the greatest exactness is *attainable* by the volumetric method.

VALUATION OF POWDERED IPECACUANHA ROOT AND DOVER'S POWDER, AS FOUND IN THE MARKET. By T. M. STEWART, Ph. C.

All the specimens were obtained from different retail drug stores in Detroit and Jackson, Michigan.

The ipecacuanha was assayed by the process lately recommended by Dragendorff,¹ the drug being extracted first by acidulated water, and then by alcohol, the pectin filtered out from the concentrated solution, when the alkaloid is either determined volumetrically by potassium mercuric iodide or extracted by chloroform or benzene in presence of barium carbonate, and the residue thereof weighed. (One c. c. Mayer's solution precipitates 0.0189 gram emetia.)

Both volumetric and gravimetric ways were found to give con-

¹ "Werthbestimmung einiger starkwirkender Drogen" (1874) S. 37.

curring duplicate results, and the two ways gave results corresponding closely with each other; but the volumetric method leaves less danger of loss in operating. Two grams were taken each time.

POWDERED IPECACUANHA.

No. 1.	1.75	per cent.	emetia.	No. 5.	1.90	per cent.	emetia.
" 2.	1.45	"	"	" 6.	2.00	"	"
" 3.	2.10	"	"	" 7.	1.90	"	"
" 4.	1.60	"	"	" 8.	2.05	"	"
Average, 1.84 per cent. emetia.							

All the numbers were examined microscopically and chemically for adulterations, especially for almond meal, chalk and antimonium potassium tartrate, but no adulterations were found, except a little extraneous woody fibre.

The compound powder of ipecacuanha was assayed as follows:² Three grams of the powder were extracted with 85 per cent. alcohol (the residue tested for adulterations); the dry residue from the alcohol dissolved in acidulated (sulphuric acid) water, filtering if necessary, and the narcotina removed by washing the acid solution with ether. After addition of excess of barium carbonate, the solution is now extracted with benzene (several portions), the residue from evaporation of the benzene being weighed as emetia (confirming by dissolving in acid water and titrating with potassium mercuric iodide). The solution exhausted with benzene is washed with amylic alcohol (several portions), and the residue from evaporation of the amylic alcohol weighed as morphia (confirming volumetrically by potassium mercuric iodide after dissolving in acidulated water). The ether and the amylic alcohol should be water-washed.

² "Dragendorff's Werthbestimmung," S. 96.

DOVER'S POWDER.

No. 1, 0.20 per cent. emetia, and 1.03 per cent. morphia.						
" 2, 0.16	"	"	" 1.00	"	"	"
" 3, 0.23	"	"	" 1.06	"	"	"
" 4, 0.20	"	"	" 1.02	"	"	"
" 5, 0.13	"	"	" 0.93	"	"	"
" 6, 0.13	"	"	" 1.00	"	"	"
" 7, 0.26	"	"	" 1.06	"	"	"
" 8, 0.23	"	"	" 0.96	"	"	"
Average, 0.19	"	"	" 1.01	"	"	"
U. S. P. standard,			" 1.00	"	"	"

The average of 0.19 per cent. in Dover's Powder equals 1.90 per cent. emetia in ipecacuanha.

All the samples of Dover's Powder were examined for adulterations, organic and inorganic, but none were found.

Correspondence.

GRAND RAPIDS, JULY, 1876.

EDITOR PENINSULAR JOURNAL OF MEDICINE — Your number for June has two articles concerning the recent proceedings of the State Medical Society, which I beg briefly to notice.

But I have first to say that the articles in question are so misleading in statement and purpose and so entirely devoid of candor as to surprise your readers.

The action of the State Society has from the first been grossly misrepresented. But a sufficient correction and reply is a plain statement of facts.

The subject of homœopathy in the University has long been a matter of thought and concern with medical men, and at last some expression with respect to it seemed necessary and proper. It seemed necessary that the attitude of the regular profession towards it should be defined.

The special committee of nine was therefore raised, and to them the whole subject was referred. The report of that committee was adopted by the Society by such decisive majorities as to indicate that the members were practically of one mind as to the matters considered.

Now, what was this action of the Society about which there has been such frothy vituperation? The report first gives a brief and truthful history of the movement which has resulted in engrafting homœopathy on the University. Then follow, in natural sequence and connection, the resolutions which Prof. Frothingham and his confreres have made the occasion of such unseemly effervescence.

The plain meaning of the first resolution, and to that I limit myself in this communication, is, that the profession, as represented in the State Society are "not content" with homœopathy in the University; "not content" that it should be thus upheld and fostered by the State; "not content" with the absurd and unnatural affiliation thus enforced by law between rational, scientific medicine, and what we all so well know to be a cheating and baseless dogma. It further means that the teaching of Hahnemannic vagaries in the University is not "in our opinion calculated to maintain or advance medicine as a science, nor is it consistent with the honor or interest of the profession."

Such are the scope and purpose of the first resolution. No other interpretation can be put upon it, no other meaning can be extorted from it, if it be taken, as of course it must be, in its proper connection with the history or preamble with which it is provided.

It has exclusive reference to homœopathy in the University; and in respect to that, it simply gives voice to the unhesitating sentiment of the profession everywhere.

A proud fact in the history of medicine is the steady fidelity with which medical men have upheld truth and honor, and resisted what they regarded as quackery and popular error.

For many centuries medicine as a profession has exhibited a

progressive, organic growth ; eliminating error and appropriating scientific truth.

Innumerable false doctrines and dreamy speculations have, like fungi, fastened upon it and hindered its growth. But these have always, one after another, been cast off. Homœopathy is the delusion—the fungus—of the times. But like the countless delusions that have gone before it, it will in due time fall out of human thought, and take its place in the long but strange record of human credulities. Educated physicians have a clear perception of this ; and true to the honorable traditions and sentiments of their profession, and confident that the future will justify them and honor their steadfastness, they reject all complicity or affiliation with the current delusion, even though it may count its votaries by the thousands.

For thus acting, the State Society has incurred the hot displeasure of Prof. Frothingham and of the faculty whom he champions. For this, and for this only, he has loaded the Society with epithet and denunciation. In season, and out of season, in the State and out of it, he has carried on his wanton crusade.

The Society passed no censure on the regular faculty in the University, and made no issue with them. Yet the Professor assumes, conjures up, an issue ; and then resorts to most unprofessional methods of warfare. He openly appeals from professional to popular tribunals. He strikes hands with popular ignorance and prejudice, and enlists a hostile press, in order, apparently, that he may the more effectually assail the State Society.

What may be the ulterior purpose of this extraordinary course I do not undertake to say ; but I may conjecture that the present design is to gain popular support for the existing amalgamation of the faculties.

In a future communication I propose to have something to say with respect to the other resolutions of the State Society.

G. K. JOHNSON, M.D.

UNION CITY, Aug. 2, 1876.

DR. J. J. MULHERON—*Dear Sir*—I have just read with much interest your very instructive address before the Wayne County Medical Society. Especially that portion of it which refers to the course which should be taken in reference to patent medicines, and having had my thoughts directed to that subject for some years past, I am necessarily interested in any thing that is said upon the subject. Now it is proposed to appeal to the secular press, and if need be dignify quackery by treating it as our adversary. Is this the best way to do? Is there no more effectual way of dealing with this subject? Can we not economize our time better by taking some other course? It seems to us we can. Newspaper controversies are necessarily indefinitely prolonged, and the issue is sometimes doubtful, and it seems to us that we can do better than to simply fight patent medicines.

But this is what might be done and it seems to us should be attempted, viz.: As far as possible a combined effort of the profession of the State should be made to procure the passage of a law somewhat like this: Every package or parcel of medicine compounded, which may be offered for sale in this State, shall have written upon such package, parcel or bottle, in the English language, a full and complete receipt thereof, and also that such compounds, before they are offered for sale, shall be subjected to analysis by some competent and legally appointed chemist, in order that it may be known that they are what they purport to be. Such a bill was presented to the legislature at its last session, but it was killed by ridicule. It was started in this place and circulated for about an hour or so; about thirty names were signed to it (the petition) and it was sent up to Lansing to be slaughtered. It seems to us if the profession of the State would unite in such an effort and get the thing properly before the public, that an influence could be brought before the legislature that it would not be willing to disregard. Such a bill would mean no persecution; it would mean no restriction in sale. It would mean simply the putting of patent medicines just where

physicians' prescriptions are placed. It would mean the putting of patent medicines just where we put our whisky and illuminating oils. If patent medicines can live through such tests as those we have mentioned, they possess more merit than we give them credit for. The only thing which, as it seems to us, needs to be settled at once, if possible, is the constitutionality of such such an act. We have consulted with private lawyers upon the subject and they say there are no constitutional objections to such a law. We wrote to the acting Attorney General of the State and he refused to give an opinion, and I am compelled to look upon him as a sort of a bass-wood man, who doesn't know enough to have an opinion.

The chemists of our State could aid such an effort by making analyses of the leading nostrums of the day, and giving the results to the proper committee of the legislature. If this subject can be brought before the legislature so that they will act upon it favorably at the next session, in our opinion the patent medicine question will be solved and that to in a manner satisfactory to the profession. Fifty thousand names could be had in such an effort, if properly managed.

E. TWISS.

PINCKNEY, MICH., August 3, 1876.

MR. EDITOR—I send you the following report of a case occurring in practice, which you are at liberty to insert in your journal if you regard it of sufficient interest to merit such honor.

Was called on June 30th to attend Mrs. — in confinement. Patient has borne seven children (this being her eighth confinement), four of which are living, but are of a decidedly lymphatic temperament. The remaining three, the mother informed me, died during their first year of "scrofula." Parents deny ever having any private disease, but the father finally admitted to me privately that he had once contracted gonorrhœa, and had several small sores on the glans penis.

Patient had a comparatively easy labor, and in my rather

hasty glance at the child I noticed nothing unusual in its appearance. While my attention was being directed to the mother, I was hastily summoned to the child by the nurse, and upon examination ascertained the following remarkable congenital malformations:

The sagittal suture was united its whole length, and extended down to the root of the nose.

The face natural, but small compared with size of the head; chest well developed; double scrotal hernia enormously enlarged, and entire absence of the penis. Lower extremities not well developed, and femur may be bent at right angle without the child evincing any signs of pain. The spine is deficient in the three last lumbar vertebræ and sacrum.

I found on the dorsal region of the spine a cleft in the spinal muscles about four inches in length and two in width, commencing at the lower border of the scapula. It was devoid of skin, being covered by a membrane of a reddish color. The vertebræ appeared to be perfect in this region. I found on a subsequent visit partial occlusion of the anus. I saw the child two weeks later in connection with my father and Dr. Haze, and we then found strong symptoms of a syphilitic taint, skin being rough and rose colored, coryza, mucous patches on the genitals, etc., etc. If the case terminates fatally (as may be reasonably expected), and a post mortem allowed, will report more fully.

H. F. SIGLER.

ATTLEBORO FALLS, MASS., August 10, 1876.

DEAR DOCTOR—In examining the genealogical records among my father's papers, I noted the following interesting fact. It is recorded in "*A Genealogical Sketch of the Descendants of Thomas Green[e] of Malden, Mass.* By Samuel S. Green. Boston, 1858.

Capt. Josiah Green, of Stoneham, on the 27th of April, 1806, had a child, a grand child and a great grand child all born on that day. "The same accoucheur, Dr. Hart, of South Reading, and the same women attended all three of the cases." Capt. Green

had two wives. The first having borne him eight children, died Oct. 27, 1798, æt 65. "He then, at the age of 64, married Aug. 23, 1799, Sarah Skinner, a woman 22 years of age, and 42 years younger than himself. When he married her he told her that his first wife had borne him eight children, and he should expect *her* to do the same. She fully met his expectation." Eight children were born from this marriage, the youngest when the Captain was 79 years old. Twelve of his *great-grandchildren* were older than some of his own children. His widow survived him, married again, and had three more children by her second husband.

In the appendix to "The Cutter Family of New England," is an account of the family of Rev. Samuel Cooke, of Cambridge, by himself. On page 292 is this entry: "On Dec. 29, 1758, a daughter was born, and was baptized on the 30th, Rebecca. (N.B. She was heard some weeks before her birth by the whole family and some others, distinctly to cry for some minutes, without possibility of mistake.)

The older obstetric authors all contain accounts of this so-called *vagitus*, but comparatively little or nothing is said of it by recent writers. I have always been skeptical regarding it, for we cannot expect sound without air, and air, we know, is not, except under some peculiar pathological conditions, found in the cavity of the uterus. The sound of air rolling through the intestines, *borborygmi*, might easily simulate and be mistaken for the cry of a foetus *in utero*. Assuming, however, that these statements are correct, it would be an interesting point to determine whether in such instances there is deficiency or absence of the *liquor amnii*. Can any of your readers furnish information regarding this?

Very respectfully,

E. S. DUNSTER, M.D.

Selections and Translations.

ADMINISTRATION OF CHLOROFORM.

Prof. Geo. H. B. Macleod, F. R. S. E., of Scotland, in a lecture to students, urges the grave responsibility of the person who administers chloroform—the anæsthetic so extensively and successfully used in that country—and says: “Every time it is administered a certain menace is directed against the life of a fellow creature, and it is only by the utmost attention to certain rules that safety is secured.” He has not had an accident from its use in an active surgical career of over twenty years. He regards it as a good surgeon does a very sharp instrument—a splendid thing when directed by skill and intelligence, but bad in the hands of children. He regards it as being much safer than ether, and believes that death occurs from culpable negligence in its administration as in many cases from the shock of the operation for which it was given, the patient not being sufficiently under its influence. No examination of the patient for cardiac or other affections is required, for if the patient is fit for the operation he is fit for chloroform. “We recognize almost no disease as rendering a patient an unfit subject for chloroform.” Heart disease is often alleviated by its employment, the chief danger being from shock in consequence of incomplete anæsthesia.

No person should be charged with any other duty when he is asked to administer chloroform, for many deaths have resulted from neglecting this rule. The state of the patient is ever changing, and these alterations must be watched and guided, a duty sufficient for any one.

Before administering the anæsthetic care should be taken to have ready at hand artery forceps to pull the tongue forward, cold water to dash on the face and chest in case of syncope, a kettle of hot water, a bowl, and a sponge large enough to fill

the bowl. In Nelaton's method the bowl and sponge can be filled with hot water and the head placed in it. This usually acts very rapidly. There should also be some aromat. spts. ammonia and brandy. Soft cloths for discharges from the mouth, a chair to sit in, and a ready means of admitting fresh air.

The chloroform should be pure and the patient prepared by a purgative the previous day, no solid food for three hours, and one or two teaspoonsful of brandy just before the chloroform. No examination of the chest, or other procedure calculated to disturb the patient, should be permitted. A towel is the best inhaler, and the fore part of the day the best time.

The patient should be in a recumbent position, with clothes loose, head low, comfortably but not heavily covered, and false teeth removed. No instruments should be laid on the patient, and crowding around of bystanders avoided. The patient should close his eyes and breathe naturally.

The anaesthetic should be continued till it annuls intelligence, voluntary motion, sensation and reflex action, or danger from shock may be apprehended. Touching the eyeball, or irritating the diseased part, may serve as a guide to the completeness of the anaesthesia. On the appearance of pallor, draw the tongue forward, lower the head, (Nelton's method), dash cold water on the face and chest, and induce artificial respiration.

As the anaesthesia passes off, a few sharp slaps will arouse the patient sufficiently to take some strong and warm tea—one of the best restoratives—when the patient should be placed, warmly covered, in a well aired dark room to sleep. With careful attention to these and similar rules, there can be very little danger in administering this potent agent.—*Brit. Med. Journal.*

ON THE HYPODERMIC TREATMENT OF INDOLENT ENLARGEMENTS OF THE CERVICAL GLANDS, by Dr. MORRELL MACKENZIE, London.

Indolent glandular enlargements should be either cured radically or left altogether untreated. Half-measures only give rise

to disappointment and disfigurement. An enlarged gland may be a slight blemish, but when it has been blistered, poulticed, painted with iodine, incised, or subjected to any of the various modes of treatment recommended in such cases, it often becomes a deformity.

As a rule, parents and young ladies are very desirous to get rid of these glandular swellings, not only on account of the disfigurement which they occasion, but because they are regarded as blots on the family escutcheon. It becomes important, under these circumstances, not only to disperse the tumors, but to leave behind as slight traces of their previous existence as possible. For the last eighteen months I have been engaged in trying various remedies, hypodermically, with a view of curing indolent glandular swellings. I have tried solutions of pepsine with and without dilute hydrochloric acid, dilute hydrochloric acid alone, dilute acetic acid, tincture of iodine, alcohol, solution of nitrate of silver, solution of chloride of zinc, and several other remedies.

In carrying out hypodermic treatment the cure may be effected either by resolution or by destruction. In the former case absorption takes place; in the latter the injection is followed sooner or later by suppuration. It is desirable, if possible, to cure by resolution. I have found acetic acid, as recommended by Dr. Broadbent for the treatment of certain kinds of cancer, the most useful remedy for the purpose. With this agent I have treated twenty-seven cases; of these fifteen were completely cured by resolution, four were greatly benefitted, in five suppuration took place, and three patients discontinued treatment without any decided effect having been produced. I have used the ordinary dilute acetic acid of the British Pharmacopœia, and have generally injected from five to twenty drops, according to the size of the gland to be treated, seven or eight drops being an average dose. The injection should not be made more than once a week. The fluid should be injected well into the middle of the gland. Suppuration has generally resulted

from the solution having been injected either too frequently or too superficially. If suppuration take place, the fluid should be drawn off with a hypodermic syringe or aspirator. The average duration of treatment by resolution is three months.

For treatment by destruction and suppuration, a solution of nitrate of silver answers best. The solution should be of the strength of one drachm to the ounce, and not more than three to five drops to be used. Considerable interstitial destruction is generally produced after three or four injections, sometimes after a single injection. When pus forms, it should be drawn off as directed. Treatment by destruction, if successful, is rather more rapid than that by resolution, but induration of the outer portion of the gland sometimes follows the treatment, and interferes with its success. I have treated five cases in this way; in three of them the cure was complete, in two incomplete. The treatment by pepsine and dilute hydrochloric acid was rapid, but was twice followed by superficial sloughs of the skin, and for that reason I abandoned it.—*Medical Times and Gazette.*

HYPODERMIC USE OF ETHER IN LABOR.

The following case is recorded in the *Medical Press and Circular*, by A. V. Macan, M. B., Assistant Physician to Rotunda Hospital and Obstetric Surgeon to the City of Dublin Hospital:

The patient, who was pregnant for the eleventh time, had had good health till within nine weeks of her confinement. She then began to complain of a gnawing pain in the lumbar and hypogastric regions. The abdomen was much larger than in any of her former pregnancies, which was caused by hydrops amnii. The amount of urine passed was much below the normal quantity. The labor was very tedious from uterine inertia. The membranes were therefore ruptured and an immense quantity of liquor amnii escaped. The foetus belongs to the class of anencephalus monsters, the diagnosis resting chiefly on the unusual shape of the mastoid processes, and the violent motion of the foetus when the fingers came in contact with the

exposed portion of the medulla oblongata. It was born without artificial assistance, but its birth was followed by postpartum haemorrhage and retention of the placenta. This necessitated the manual removal of the placenta, which was accomplished with but slight additional loss of blood. The woman, however, got gradually worse, exhibiting all the symptoms consequent on severe loss of blood. I therefore determined to try the effect of the subcutaneous injection of ether as recommended by Prof. Von Hecker of Munich.

As some blood was still escaping per vaginam, I thought it necessary to combine it with the injection of perchloride of iron into the uterus. Soon after 44 minims of ether had been injected into the cellular tissue of the abdominal walls reaction suddenly set in. The change was so sudden and unusual that no doubt could be entertained that it was due to the ether. The woman's convalescence was rapid and uninterrupted, she being able to leave the room on the twelfth day.

The chief point to be attended to in making the injection is to pass the syringe well down into the subcutaneous cellular tissue, otherwise troublesome abscesses may form at the seat of the injection. The quantity to be injected depends entirely on the pulse. Prof. Von Hecker frequently injects from two to four drachms at short intervals. The effect is very transient, so that the injections have to be repeated. Its use need not be confined to postpartum haemorrhage. I have also tried it in accidental haemorrhage, rupture of the uterus and puerperal fever, in all cases with more or less effect. Dr. Atthill, the present Master of the hospital, has used it with good effect in a case of placenta praevia, and it has been used by Dr. Bennett and Dr. Croly for collapse in case of strangulated hernia. Prof. Winckel, of Dresden, has used it in a case of pulmonary embolism following delivery, where it completely relieved the intense paroxysms of dyspnoea.—*Medical and Surgical Reporter.*

TREATMENT OF EPILEPSY. By PROF. BENEDIKT.

There is perhaps hardly a disorder wherein the therapeutic zeal of physicians is so frequently rewarded, and where unscientific treatment so often fails. The treatment which has come most prominently to the foreground at the present day, is that by bromide of potassium, which should be administered in large doses ($\frac{1}{2}$ to 1, up to 4 to 6 grammes) once or twice a day. By this means, without doubt some are cured, in many there is a marked improvement as to the frequency and intensity of the attacks, at least for a long time. Only very seldom is there no good effect. This action has been attributed to the potassium, *par excellence*, and hence it is stated that similar preparations of potassium, e. g., chlorate of potassium, have a similar therapeutic value. The same is said of the sodium-salts. I have made no extended parallel experiments, but after various isolated experiences, this opinion does not seem to me to be correct. Several times I have observed that patients who had been treated with perfect safety by bromide of potassium, and much relieved, relapsed upon the use of other potassium-salts, and were benefitted again immediately upon the resumption of the bromide. Ill effects which follow the use of the bromide almost exclusively, before all the exanthemata, have certainly for those cases which are favorably influenced, no weight in comparison to the frightful character of the Sacred Disease. I insist, somewhat strenuously, that patients shall not wholly discontinue the use of the bromide, even if I do from time to time during a protracted freedom from the symptoms, permit the doses to be taken less frequently, and in considerably diminished size. During menstruation, also, I direct at least *one* dose, and I have become convinced that pregnant women may continue to use the drug with impunity to the time of their delivery. The question whether wet nurses can take the drug, I believe, after experience, should be answered in the negative; and I would never advise any female patient who suffers from epilepsy, and who moreover takes the bromide, to nurse the child herself. There

is perhaps no doubt that the bromide exerts in time a lasting influence upon the intellectual faculties, which does not, however, justify a total discontinuance of the drug, since there is less harm done by it than by frequently repeated epileptic attacks. In the hysterical varieties the bromide does not, as a general thing, seem to effect the prognosis less than in other forms of convulsive disease.

Another important drug is belladonna and atropia, which in increasing doses, taken for a long time, and the dose lessened upon the commencement of intoxication, but not wholly abandoned, may have a beneficial effect upon the disease. The question when we should prescribe bromide of potassium, and when atropia, I would answer by saying that atropia must be reserved especially for those times and cases in which convulsions follow close one upon another with such severity that the life and intelligence of the patient are greatly endangered. Then atropia frequently renders surprising service. The opinion of Schroeder van der Kolk, that preparations of belladonna exert a bad influence upon the intelligence of the patient, I believe, after experience, during the time before the universal introduction of the bromide, to be correct.

A drug of which we ought to expect much as an antispasmodic—namely, curare—is in the highest degree uncertain. It is true I have reported a few cures, and one cured case I had under my observation for many years, but these cases were exceptional experiments. It does not surprise me that curare is generally unreliable, now that we know that it does not operate upon the vaso-motor nerves, and epilepsy is without doubt essentially a vaso-motor neurosis.

The zinc preparations and nitrate of silver are only exceptionally beneficial, and the effect is principally due to the fact that they operate upon a special, but obscure cause of the suffering, e. g., upon irritations of the pneumogastric nerve. It would be supposed that secale cornutum might be very advantageously employed as anti-epileptic; at all events it should be submitted to careful experimentation.

Quinia and iron probably work favorably only in hysterical and hystero-anæmic conditions. Iodide of potassium and mercury are useful not only in syphilitic complications, but especially in symptomatic epilepsy. Hydropathic and thermal measures are universally prized in hysterical cases, and now and then in symptomatic cases. Iron baths are useful in the hysterical variety, but it must be borne in mind that the spasms increase very considerably during the ferruginous treatment; a good result, however, ultimately follows. Electricity is useful in the more violent hysterical variety, particularly galvanization along the spine. In general, I find electricity especially indicated where in the intervals there is considerable disturbance of the sympathetic, particularly of the facial branches, etc., the treatment being directed to the special symptoms, e. g., galvanization of the sympathetic and plexus in prodromal disturbances in the upper extremities. In reflex epilepsy the experiment may be made upon the peripheral nerves. Sometimes this is followed by decided benefit.

It is especially true of epilepsy, that the physician who studies the disease most diligently, observes most critically the prodromata and different forms of attack, and is swayed by the noble ambition to do all that can be done to help, will achieve greater success than he who heedlessly observes and treats this disease.

The pathological anatomy of epilepsy furnishes very little of practical importance. Whether in the true and reflex forms there is a lesion, and through the affection of the cerebral hemispheres the centre becomes diseased, is unknown, or whether the cornu ammonis is such a centre.

Vascular dilatation in the medulla oblongata seems to occur only secondarily, in consequence of the vascular excitement attending many attacks.—*Translated from the Wiener Medizinische Presse, for the Journal of Nervous and Mental Diseases.*

INSANITY.

Dr. J. S. Conrad, in the report of the sections of Psychology and Physiology, to the Medical and Chirurgical Faculty of Maryland, held April 11th, 1876, maintained:

1. That in the United States the insane population is increasing more rapidly relatively than the sane.
2. That the present system of support and treatment of the indigent insane serves to increase the number of chronic cases.
3. That the present system of hospitals is expensive beyond the ability of the States.
4. That the cottage system for chronic cases presents the best method of correcting the present system, by securing greater economy, and more liberty and comfort to the insane.
5. That the occupation of the insane can be utilized to a far greater degree with benefit to the patient and profit to the state.
6. That a greater amount of liberty may be granted the insane without detriment to themselves or to others.

The subjoined table is somewhat to the point as showing the increase of the insane:

Date.	Hospitals.	Population.	Insane.
1773	1	3,000,000	
1824	2		
1828	5		
1839	8		
1850	14		
1860	30	31,443,321	23,999
1870	40	38,558,371	37,432
1876	62	42,115,896	44,148

The increase of population from 1860 to 1870 was 22 per cent. and of the insane 55 per cent. The estimate for 1876 is founded on these ratios. In 1860 there was 1 insane to 1,310 sane; in 1870 1 to 1031.

Dr. Wilkins, Commissioner in Lunacy for California, in his report of 1871, shows that the proportion of the insane to the sane population of England is 1 to 403; in Scotland, 1 to 336; and in Ireland 1 to 302.—*Virginia Medical Monthly, May 1876.*

SYNOVITIS BY ASPIRATION.

Dr. N. G. Hutchinson, *Proceedings of the Medical Society of the County of Kings, Brooklyn, N. Y.*, reports a case of chronic synovitis of the knee joint of ten years standing. The patient was 33 years old and anemic. The leg was considerably flexed, the patella floated on the subjacent liquid, which could be readily detected by its fluctuation. Ten ounces of serum was removed by aspiration and the knee tightly bandaged. One week later seven ounces more were removed and again bandaged. At the end of the second week a small quantity of liquid had again accumulated, but the patient would not permit it to be removed, he being very much improved. Iodine internally and mercurial ointment locally were ordered. Ptyalism was induced in five days from, supposed, excessive use of the ointment, which had to be discontinued. The patient was completely well in two months, and the doctor considers the aspiration the most important part of the treatment.

Ars, ante omnia veritas.

Editorial.

INTERNATIONAL MEDICAL CONGRESS. Philadelphia, September 4-9, 1876.

The International Medical Congress will be formally opened at noon on Monday the fourth day of September.

The session of the Congress and of its sections will be held in the University of Pennsylvania, Locust and Thirty-fourth streets.

The General Meetings will be held daily, from 10 to 1 o'clock. The Sections will meet at 2 o'clock.

Luncheon for members of the Congress will be served daily in the University building from 1 to 2 o'clock.

On Wednesday evening, September 6th, Dr. J. J. Woodward, U. S. A., will address the Congress on the scientific work of the Surgeon-General's Bureau.

The public dinner of the Congress will be given on Thursday evening, September 7th, at 7 o'clock.

The registration book will be open daily from Thursday, August 31st, to Saturday, September 2d, inclusive, from 12 to 3 p. m., in the hall of the College of Physicians, northeast corner of Thirteenth and Locust streets, and at the University of Pennsylvania on Monday, September 4th, from 9 to 12 m., and daily thereafter from 9 to 10 a. m. Credentials must in every case be presented.

Letters addressed to the members of the Congress, to the care of the College of Physicians, northeast corner of Locust and Thirteenth streets, Philadelphia, during the week of meeting will be delivered at the University of Pennsylvania.

The Secretaries of State and Territorial Medical Societies are requested to forward without delay to the chairman of the Committee on Credentials, I. Minis Hays, M.D., 1607 Locust street, Philadelphia, lists of their duly accredited delegates to the Congress.

Delegates and visitors intending to attend the Congress are earnestly requested individually to notify immediately the same Committee.

This information is desired to facilitate registration, and to ensure proper accommodation for the Congress.

Members intending to participate in the public (subscription) dinner of the Congress will please notify the Secretary of the Committee on Entertainment, J. Ewing Mears, M.D., 1429 Walnut street, Philadelphia.

Gentlemen intending to make communications upon scientific subjects, or to participate in any of the debates, will please notify the Commission before the 15th of August.

AMERICAN DERMATOLOGICAL ASSOCIATION.

At an informal meeting, held in Philadelphia, at the rooms of the Section of Practical Medicine, of the American Medical Association, Wednesday, June 7, 1876, after an election of a

chairman and secretary *pro tem.*, it was resolved to call upon such American physicians as had evinced a special interest in Dermatology to unite in forming an American Dermatological Association ; resolved that the meeting for organization be held in the University of Pennsylvania, Philadelphia, September 6, 1876, at 6 p. m., or immediately after the close of the meeting of Section of Dermatology and Syphilology, of the International Medical Congress, on that day.

It is sincerely desired that all interested will be present and aid in the organization, and that they signify their pleasure to the Secretary, Dr. L. D. Bulkley, 1 East 33d street, New York, at the earliest opportunity.

DR. SIMS AND THE CODE OF ETHICS.

In his address before the late meeting of the American Medical Association, President J. Marion Sims referred to that ancient instrument, the Code of Ethics, in terms which have spread some consternation among the more conservative members of the profession. He was of the opinion that it is not up to the standard of professional requirements, while it hampered the profession at large in many ways which should be perfectly free. It is violated every day, not only by the rank and file but by those high in authority—men who are considered leaders, advanced thinkers and workers. He asked very pertinently how many of the members present prescribe chlorodyne, tolu anodyne, McMunn's elixir of opium, etc.? Yet these are secret remedies, and their prescription is a flagrant violation of the code. Again, in regard to patents, he asked why physicians who invent instruments may not take out patent rights? Their failure to do so, or rather the provision of the code which forbids their doing so, simply enriches the instrument maker at the expense of the time and labor of the inventor. Very unjustly the inventor of an instrument, on which he has expended much time, anxiety and money, is compelled to *give* his invention.

Does the profession at large, or does the public, derive any benefit from this robbing of the inventor?

These views backed by the high standing of their author must have their influence on the professional sentiment touching the code. The subject is certainly a delicate one to handle, but in view of the hardships it imposes it should be dealt with. The questionable efficacy of the instrument, moreover, should furnish another reason why we should not be debarred from criticising it. Honorable men, guided by the great injunction of "Do unto others as you would have others do unto you," which had its origin some time previous to the drafting of the American code, do not need the latter, while dishonorable men require more than a printed document to keep them in line. As a prominent physician remarked to us the other day, the code of ethics is the cause of a great deal of unnecessary dispute among even honorable physicians. Points very frequently arise which the code does not cover, while it is possible to violate the letter without doing violence to the spirit and *vice versa*. The existence of the code even as a guide is beginning to be regarded by many prominent members of the profession as of questionable propriety and utility. Dr. Sims takes occasion to impress upon the Association the importance of educating its members up to that higher code, that unwritten law which is the universal standard of England.

The *Virginia Medical Monthly* in discussing this subject has the following, the sentiment of which we endorse:—

"There are many in the profession, it would seem, who would rather establish a reputation for blind obedience to the 'code' than for learning in medicine and science generally. When an applicant for membership comes before a medical society, the question regarding him is not so much as to his moral standing, his gentlemanly deportment in society, his scientific attainments, as it is, is he *ethical* in his walk and conversation? The danger of this tendency of our day is too obvious to need remark—it must inevitably, sooner or later, lead to the substitution of plated ware for pure metal.

"The 'code' is responsible for this. In proof, we refer the curious to Section IX of the By-Laws of the National Associa-

tion, which excludes from representation any society or institution that does not adopt the 'code of ethics, or that has intentionally violated or disregarded *any article or clause of the same.*' (Italics ours.) It makes no difference how trivial the offence, or how honestly parties in different communities may vary in opinion as to the propriety or even right of the injunction, the effect is still the same—professional ostracism.

Thus it appears, also, from this provision—this arbitrary though inexorable law, which is not founded on justice or common sense, and in support of which no argument, in fact or by analogy, can be brought—that the *chief* purpose of this grand, national body of *savants*, is *not* to stimulate medical research and scientific study; it is *not* to put necessary furniture and needed repairs in the house—it is simply to paint the outside—to fix short-sighted, arbitrary laws which must hamper progress. Yet, who that attends the annual meetings of the Association has thought of this feature, or has an idea that the principal object of the organization is ethical rather than scientific? What medical man of culture, refinement or delicacy of feeling, or professional standing would willingly give himself up to such wrangles as must sometimes occur under so short-sighted a rule? Did the representative medical men of Texas, of California, of Maine attend the late session in Philadelphia with the uppermost desire to enter into ethical, or scientific discussions? We cannot suppose that any physician attends these meetings from so small a motive. They go rather, that by the exchange of professional experiences, by the reports of cases, by the discussions of worthier subjects, they may thus gain some new truth of value to *themselves*, to science, and to the suffering creatures to whom in their daily rounds, they are called upon to minister—that they may return to their homes with a more elevated conception of their duties, and better prepared to meet the higher obligations of their noble calling. Their motive is more commendable—their purpose more exalted."

WE must respectfully insist on delinquent subscribers sending in the amounts due on their accounts. The response to bills sent out last month has been quite gratifying, but there still remains a number who have failed to answer. It requires no argument to convince such that we depend on their little \$3 bills to help pay expenses, and we trust that it will not be necessary again to remind them of the fact.

Reviews and Bibliographical Notes.

THE STUDENT'S GUIDE TO THE PRACTICE OF MIDWIFERY. By D. Lloyd Roberts, M. D., M. R. C. P., Loud. Philadelphia: Lindsay & Blakiston. Detroit: J. M. Arnold & Co.

This is a book of 327 pages, and aims to be a manual for the instruction of students. A glance through the work, however, reveals many points of interest to the practitioner, and especially to him whose time for reading renders it necessary for him to receive his literature in concentrated form. Being free from the verbosity which oppresses some larger works, and being of convenient size, it will prove a very useful companion to the young practitioner while keeping tedious watch on a case of protracted labor.

In addition to midwifery proper, it treats also of generation and the diseases incident to parturition, as puerperal fever, convulsions, etc.

EXTRA-UTERINE PREGNANCY; ITS CAUSES, SPECIES, PATHOLOGICAL ANATOMY, CLINICAL HISTORY, DIAGNOSIS, PROGNOSIS, AND TREATMENT. By John S. Barry, M. D., Obstetrician to the Philadelphia Hospital, &c., pp. 286. Philadelphia: Henry C. Lea. Detroit: E. B. Smith & Co.

This is a work based upon a record of five hundred cases of extra-uterine pregnancy, collected from various sources. The utility of such a work is obvious. Serial literature has heretofore contained much on this subject which is here condensed and made of practical utility.

Among the causes of this abnormal condition enumerated are pelvic inflammations, hernia of internal genital organs, displacements and tumors of the uterus, moral and emotional causes, diseases and deranged physiological condition of the Fallopian tubes, etc.

Treatment is considered under three heads: 1. During the

first four months. 2. During the remainder of the term of gestation; and, 3, after that period, or after the death of the foetus. The various methods recommended and employed are fully considered.

On the whole the work is a valuable acquisition and supplies a want in the literature of the subject which has heretofore existed and has been felt.

ATLAS OF SKIN DISEASES. By Louis A. Duhring, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania; Physician to the Dispensary for Skin Diseases, Philadelphia, &c. Philadelphia: J. B. Lippincott & Co. Detroit: E. B. Smith & Co.

The necessity of an atlas of skin diseases arises from the fact that no mere description can convey an adequate conception of a given case—it must be *seen* to be understood. The profession of this country has heretofore been dependent on European publications of this nature, and, however, admirable these are in scientific accuracy and mechanical execution, they are deficient in that they make no mention of certain diseases and modifications of diseases which are peculiar to this country. The present work is designed to supply such defects. The first part only has been thus far received. It is devoted to a consideration of eczema (*erythematosum*) proarisis, lupus erythematosus, and syphiloderma (*pustulosum*). A description of each affection accompanies the plate. The plates are chromolithographs, and very accurate in regard to color. We bespeak for the enterprising publisher a hearty appreciation of the work by the profession.

LECTURES ON ORTHOPEDIC SURGERY AND DISEASES OF THE JOINTS, WITH 274 WOOD ENGRAVINGS. By Lewis A. Sayre, M.D. Appleton & Co., New York; E. B. Smith & Co., Detroit.

This octavo volume of 474 pages is an invaluable one to the profession. The author is well known as our best specialist in

this department of our profession, and for which his long connection with the Bellevue Hospital and the Bellevue Hospital Medical College has rendered him signally fitted.

Our treatises on surgery are singularly brief in their treatment of the diseases that the author has specially considered in the volume before us, and a demand from the profession has long anticipated the author's lectures as they now appear in book form. Yet, to the practitioner, a more treatise-like manner than college lectures allow, would have been more acceptable.

A brief yet complete history of the rise of "Orthopedy" is the opening chapter, and five others follow upon "Deformities," in which the etiology, prognosis and general treatment are considered. Five other chapters then follow upon "Talipes" in its many forms; in these the subject is treated in full. We cannot forbear quoting a portion found on page 78, when speaking of the time to begin treatment. To premise the short quotation we would say the author believes "paralysis, as a rule, is the lesion" in talipes. But this is what he says as to the time of commencing treatment: "Whatever method of treatment you decide to adopt, there is an important *principle* which should govern its application, and this must be taken into consideration at the very outset. The principle is, treatment of congenital club-foot should begin *at birth*." Further down the page he italicises these words: "*Treatment of these cases [congenital] should be commenced the instance the child is born.*" In case the Talipes be acquired, the author says "the rule is equally important, and treatment should be commenced *immediately upon the receipt of the injury*. Every day, week or month that treatment is neglected diminishes the chances of success when finally resorted to." A chapter is then devoted to the minor diseases of the feet, as corns, bunions, etc., which is followed by two chapters upon the diseases of the ankle joint; four chapters upon the knee joint; six chapters upon the hip joint; two chapters upon the spine; two chapters upon ankylosis; and finally a chapter upon miscellaneous themes.

We have nothing else upon hip joint that approaches anywhere near the completeness and clearness the disease is herein treated of. The chapters upon this subject alone make the book invaluable to the practitioner.

The author is everywhere on the lookout for the little things that so often make our treatment of joint diseases (especially hip) so near failures; and we are sure that after reading his chapters, no one can gainsay him the point as well taken. If there is anything the busy practitioner is apt to fail in, it is in the proper appreciation of minor details; too often the "dressing" is left to a student or a not overcareful assistant.

The publishers have given us their usual clear type, good paper and binding.

C. H. L.

MORTALITY REPORT OF THE CITY OF LANSING FOR THE MONTH OF MAY. *From Statement by DR. H. B. BAKER.*

DISEASES.		LANSING.	
Accidental.....	1	Unknown.....	1
Bronchitis.....	1		—
Consumption.....	1	Total.....	8
Diphtheria.....	1		
Heart Disease.....	2	AGES.	
Nervous Affection of Brain.....	1	Under five.....	0
Pneumonia.....	1	Ten and over five.....	1
	—	Over ten and under thirty.....	6
Total.....	8	Over thirty.....	1
NATIVITY.		Total.....	8
Canada.....	1	Estimated population.....	8,610
England.....	1	Deaths in May at annual death	
New York.....	1	rate in 1,000.....	10.94
Ohio.....	1		

REPORT FOR THE MONTH OF JUNE.

DISEASES.		AGES.	
Gravel.....	1	Ten and over five.....	1
Catarrhal Fever.....	1	Over ten and under thirty.....	1
Unknown	1	Unknown.....	1
	—	Total.....	3
Total.....	3		
NATIVITY.			
America.....	1	Estimated population.....	8,660
Michigan	1	Deaths, June at annual death	
Unknown.....	1	rate in 1,000.....	4.22
	—		
Total.....	3		

*MORTALITY REPORT OF THE CITY OF DETROIT FOR THE MONTH
OF MAY, 1876. Prepared from Statement furnished by C. H. BORGMAN,
Esq., City Clerk.*

I.—ZYMOTIC DISEASES.	
Cerebro-spinal Meningitis.....	1
Croup.....	1
Diphtheria.....	2
Erysipelas.....	1
Measles	3
Puerperal Peritonitis.....	1
Scarlatina.....	3
Small Pox.....	8
Typhoid Fever.....	5
Varioloid.....	1
Whooping Cough.....	1
Total.....	27
II.—CONSTITUTIONAL DISEASES.	
Anasarca.....	1
Atrophy.....	1
Bright's Disease.....	3
Cancer.....	4
Chronic Meningitis.....	1
Consumption.....	22
Chronic Dysentery.....	2
Cyanosis.....	2
Debility.....	6
Diarrhoea.....	2
Dropsy.....	5
Inanition.....	1
Marasmus	4
Old Age.....	4
Total.....	58
III.—LOCAL DISEASES.	
Apoplexy.....	2
Abscess.....	1
Asthma.....	1
Bronchitis.....	5
Convulsions.....	12
Colic.....	1
Congestion.....	2
" of the Lungs.....	1
" " Brain.....	5
" " Bowels.....	1
Disease of Spleen.....	1
Heart Disease.....	5
Hernia.....	1
Hydrocephalus.....	2
Inflammation of the Lungs.....	11
" " Bowels.....	3
Jaundice.....	1
Laryngitis.....	1
Peritonitis.....	1
Pleurisy.....	1
Paralysis.....	2
Spina Bifida.....	1
Spinal Disease.....	1
Teething	1
Umbilical hemorrhage.....	1
Total.....	64
Accidental.....	8
Stillborn	20
Unknown.....	2
Total.....	30
NATIVITY.	
Detroit	III
United States.....	33
Ireland.....	17
Germany.....	16
Holland.....	2
Poland.....	1
England.....	4
Scotland.....	2
Mexico.....	1
Belgium.....	1
Canada	5
Unknown.....	4
Total.....	197
AGES.	
One year and under, including still-born.....	82
One year and under two.....	10
Two years and under three.....	8
Three years and under four.....	3
Four years and under five.....	0
Five years and under ten.....	9
Ten years and under twenty.....	8
Twenty years and under thirty...	20
Over thirty years.....	54
Unknown.....	3
Total number of deaths.....	197
Estimated population.....	115,000
Estimated annual death rate in 1,000, from May deaths..	20.5
PER CENT. TO TOTAL MORTALITY.	
Zymotic diseases.....	13.70
Constitutional diseases.....	29.44
Local diseases.....	32.44
Under five years.....	52.28
Between five and ten.....	4.56
Between ten and thirty.....	14.21
Thirty and over.....	27.92

REPORT FOR THE MONTH OF JUNE.

I—ZYMOTIC DISEASES.	
Cholera Infantum	7
Diphtheria.....	2
Erysipelas.....	1
Fever.....	1
Measles.....	1
Puerperal Fever.....	1
Phlegmasia dolens.....	1
Pertussis	2
Rheumatism.....	1
Small Pox.....	7
Scarlet Fever.....	1
Typhoid Fever.....	2
Total	27
II—CONSTITUTIONAL DISEASES.	
Bright's Disease.....	1
Congenital Convulsions.....	7
Cancer.....	3
Consumption.....	14
Dropsey.....	1
Debility.....	8
Eclampsia.....	4
Inanition.....	4
Leucocytæmia.....	1
Ossification of Heart.....	1
Old Age.....	3
Paralysis.....	3
Scrofula.....	3
Marasmus.....	4
Teething.....	2
Total.....	61
III—LOCAL DISEASES.	
Asthma.....	1
Apoplexy.....	1
Bronchitis.....	2
Congestion of Bowels.....	1
" Brain.....	4
" Lungs.....	1
Dysentery.....	4
Diarrœa.....	8
Disease of Kidneys.....	1
Encephalitis.....	3
Enlargement of Liver.....	1
Gastro Enteritis	1
Heart Disease.....	7
Liver Complaint.....	1
Pneumonia.....	1
Metritis.....	8
Meningitis.....	3
Spinal Congestion.....	1
Total.....	49
Unknown.....	1
Still-born.....	16
Accidental.....	11
Suicide.....	1
NATIVITY.	
Detroit.....	100
Germany.....	16
United States.....	19
England.....	5
Scotland.....	1
Switzerland.....	1
Canada.....	8
Ireland.....	12
Poland.....	1
Unknown.....	3
Total.....	166
AGES.	
One year and under.....	72
Two years and over one.....	9
Three years and over two.....	3
Four years and over three.....	2
Five years and over four.....	3
Ten and over five.....	0
Twenty and over ten	9
Thirty and over twenty	20
Over thirty.....	44
Unknown.....	2
Estimated population.....	115,000
Estimated annual death rate in 1,000 from June deaths, 17.32	
PER CENT TO TOTAL MORTALITY.	
Zymotic Diseases.....	16.27
Constitutional Diseases.....	36.74
Local Diseases.....	29.52
Under five years.....	53.61
Between five and ten.....	0.00
Over ten and under thirty....	17.46
Thirty and over.....	26.50

*METEOROLOGICAL REPORT for July, C. HENRI LEONARD, M. D.
Observer for STATE BOARD OF HEALTH.*

BAROMETER.—Highest, 30.169; lowest, 29.535; range, 0.632; average, 29.945.

TEMPERATURE.—Highest, 90 (two degrees higher than that of last month); lowest, 53 (three degrees higher than that of last month); range, 37; average, 73 (only 2.3 degrees higher than last month). The same remark applies to the temperature this month as I made last; viz: that the street temperature, owing to pavement reflection, etc., of heat rays, is higher than that of the thermometer from which our reports are read. This month, the general opinion to the contrary, has *not* been exceedingly hot. The mean temperature for the month of July last year, was 76.1; thus showing our recent July was a cooler month by a daily average of *over* three degrees. If we take the average for the last five Julys (that of 1875 being the coldest, then 70.5), we find this year to be but one-half of a degree warmer than the average; not a very material increase of temperature certainly. Then why has it seemed so very oppressive? Because of the large excess of moisture in the air. This has been an *exceedingly wet* month, and the amount of vapor present has been immense; hence, the atmosphere has been heavier, and there has been a lack of transpiration. Sergeant Van Heusen, of the Signal Service, has observed this, and has so officially reported upon it. He also says that "Wednesday, the 12th, and Tuesday, the 18th, the very days upon which the heat was most severely felt, the absolute humidity (the number of grains of moisture in each cubic foot of air) was unusually great, though on neither of those days did the temperature approach so high a point as on other days when the heat was not so much complained of.

WINDS.—Greatest velocity, 36 miles per hour, the greatest velocity ever reached in the summer season at the Station since the Signal Service has been established here. This was on the 5th; the gale striking us at 9 a. m. and continued till 1 p. m. At quite a number of observations the velocity has been but 2 miles per hour. The prevailing direction was S. W., as last month, and the total number of miles travelled was 4,293; considerable less (over 300 miles) than for last month.

CLOUDS.—There were nine clear days this month, a gain of six over last; four cloudy, and 12 rainy ones.

RAINFALL.—Greatest daily, 1.68 inch; this was on the 10th. Next greatest, 1.52 inches; this was on the 1st. Greatest daily last month, one-quarter of an inch. Total amount for the month, 5.94 inches; almost a *daily average* (when it rained) of a *half an inch*. This fall has been unprecedented. In 1875 it was 3.73 inches; in 1874, 3.65; in 1873, 3.38 inches; in 1872, 2.63 inches. The total amount of precipitation this month was *twelve times* that of last.

MOISTURE.—The gross amount present at any one time was at the evening observation on the 12th; the day observations giving 8.20 and 8.40 grains. This was one of our memorable "oppressive" days. The highest temperature that day was 88; the average, 80 degrees. Along the latter part of the month the amount has fallen off from this nearly *one-half*. It seems to me that the absolute humidity has much to do with the abdominal troubles in children as well as adults. Throat and lung troubles also seem to depend something on it also. I am at present at work upon the problem.

OZONE.—There has been a gradual falling off of its presence. The maximum coloration was 2. This was at 2 p. m. of the 4th. The most of the observations have shown less than 1 (of the scale) present.

T H E
PENINSULAR JOURNAL
OF MEDICINE.

SEPTEMBER, 1876.

Original Communications.

*VICARIOUS MENSTRUATION: by C. HENRI LEONARD, M. D.,
Detroit, Mich. Read Before the Wayne County Medical Society.*

To get at the question directly, I ask what is *normal* menstruation, and *secondly* what brings it about? If we can answer these intelligently, possibly the vicarious will be the easier of elucidation. I take no account now of ovulation, further than this: it is really *the* characteristic of the sexual life of woman, and of which the monthly passage of blood by the vagina is the *regular* symptom. This last clause, in brief, is my definition of *normal* menstruation—a symptom of ovulation. Now to understand the latter portion of the question, what brings this *symptom* about? The ovaries and uterus of woman are, of all her organs, preeminently in anatomical and sympathetic connection with that great nervous system, which is the general custodian of all animal life—the *systema nervus sympatheticus*. This sys-

tem, by its vaso-motor apparatus, controls circulation, as well as the many other functions of the body that are not so intimately connected with our theme as to, at present, demand special attention. This apparatus as a whole, is constituted of two principal centres, and of nerve fibres. [Goltz, Masius, Van Lair, etc.] These centres are, 1st, the cerebro-spinal axis; 2d, the peripheral or vascular ganglia. I treated of these sufficiently in an essay upon the "Sympathetic Nerve" read you some time ago. The nerve fibres, are fibres of reunion of these centres, and are vaso-constrictor and vaso-dilator; in part centripetal, in part centrifugal. These fibres are often united in one trunk; the vaso-dilator are usually predominating.

Leaving the nerves now for a moment, we turn to the consideration of the blood-supply of the internal sexual organs of woman. The ovaries and uterus, in the main, are supplied from the same source, and by the same system of vessels, so much as to lead anatomists to class the vessels as utero-ovarian. The veins are equally anastomotic, and at their several exits are finally so intimately connected as to constitute the utero-ovarian mesh-work. As to the uterus, it is to the inner coat of its muscular walls, and especially the mucus membrane that the blood-supply is most profuse.

At each returning month there is a growth and maturation of the ovule of Baer, the Graafian follicles enlarging and pressing upon the firm fibrous covering of the ovary, thus engendering a flow of blood to the part irritated by the pressure, and just as you have an immensely swollen finger and hand from a whitlow, you find the irritation becomes so great that you get a maximum turgescence of the whole ovario-uterine blood-vessels ending in the bloody exosmosis and epithelial degeneration of the uterine mucosa that we call menstruation. It is, in fine, a vaso-constrictor paralysis, and vaso-dilator excitement induced

by the pressure of the maturing Graafian folicle upon the nerve terminations of the sympathetic in the stroma of the ovary, and hence there results the customary hyperæmia of the whole genitalia as results in nervous irritations elsewhere.

By the establishment of the menses the peculiar *normal reflex nervous symptoms* developed in other organs than the uterus are at once ameliorated and are finally felt no more; not so much because of a relief of the so-called general "menstrual plethora," but because the local blood pressure is being removed from the sensitive nerve filaments of the sympathetic that are found in and about the uterus and ovaries.

This, gentlemen, to my mind is, physiologically, normal menstruation.

What, now, is *vicarious* menstruation? Gynæcologically we understand the term to mean a sanguinolent discharge, accompanying the usual other symptoms of ovulation, but taking place from some other organ than the uterus. Understand me, a vicarious menstruation does not fully take the place of, but it *assumes* the place of a normal monthly uterine discharge of blood. Is such a discharge physiologically possible, knowing as we do the physiological process of a normal menstruation? Normally the process is in most part reflex, due to a hyperæmia induced by a pressure upon the nerve filaments, and their resulting reflex action. Normally the sickness at the stomach, headache, ennui, etc., etc., is due to reflex nervous impressions. In fact, you can get pain or disturbed functions almost any where from uterine or ovarian irritations.

This reflex field is not narrowed to the influences of the uterus, but the phenomena are observed as taking place from nerve irritation in any of the organs. A phimosis may give us a paralyzed bladder, and paralyzed extremities; an irritation of the clitoris, similar, phenomena. Worms in the bowels may

give us convulsions; sexual intercourse, epilepsy; and so on with numerous other instances that I need not mention, except the latest, that of hypermetropia and strabismus as causes of chorea. Now all of these various conditions are dependent upon perverted nervous action. The peripheral filaments are irritated, the irritation is conveyed to one of the principal centers, and the normal nerve cell action is perverted and paralysis of certain nerves result, while others are the victims of an untoward stimulation. The circulatory system is most of all under the control of this great sympathetic system, and hence we herein find many of our strangest phenomena. Who but a physio-pathologist would think of looking for the cause of a red nose in a *lady*, not a prostitute or victim of venereal disease, at her uterus? Yet it is a well known fact that a suppression or obstructed menstruation is a *common cause* for *acne rosacea*; certainly a foreshadowing of the completed vicarious function in the common nose-bleeding of menstrually deranged women. Both of these are vaso-motor paralyses. Gynæcologists, gentlemen, are not alone "run mad" over a woman's uterus, as some narrow-minded practitioners seem fond of averring; our dermatologists are equally insane, you see, upon some of the occult causes of the common pathological phenomena observed in *their* special departments.

There is yet another allied condition to our vicarious menstruation seen in our migraine—our hemicrania sympathetic paralytica and tonica. You see the classical name for the disease is fully descriptive of the cause of the complaint; a paralyzed (most frequently) condition of the sympathetic vaso-constrictors, and the result is a hemicranial congestion, and pain. I have seen profuse watery discharges from one nostril, and one eye (the left generally) in these peculiar headaches. The cause of this peculiar complaint in women is attributable to *perverted*

menstrual phenomena, as you well know, in most cases. The exosmotic flow of blood is all that is wanted to finish the picture of *complete* vicariousness.

But enough has been said to show the physiological possibility of a vicarious menstruation. It remains only to adduce cases to show the possibility as not only a probability but a certainty. I shall detail three cases, rather unique, that have occurred in my practice during the past two years, and shall also condense a few from journals and other recent authorities.

Mrs. ——, an American, aged 24; married four and one-half years. No children, one miscarriage after six months' marriage. Always had more or less pain preceding the menses, it being located in the ovarian regions. This was so great that most always the first day of the customary sickness was spent in bed. Haemorrhage was abundant finally, indeed so much so as to be properly classed as menorrhagia. The pain, as soon as the discharge became quite free would abate, and finally leave her entirely. As she was quite a fashionable young lady, her mode of life, as late suppers, parties and dancing parties and dancing made her troubles worse, so that treatment was instituted. A lady physician in the city had her in charge for some time (this was over two years ago) and used astringent injections quite freely, to cure her "bearing down pains" and excessive flow of blood. She succeeded in this, and soon after the lady was taken with so-called "bleeding from the lungs." These bleedings occurred quite frequently and periodically. Phthisis was at once diagnosed by several of our physicians in this city, and in Penna. Accordingly she was put upon cod liver oil, etc., though her *embonpoint* was nearly as rotund as ever. This is about the history of the case prior to my seeing her. On questioning her closely, I found these haemorrhages occurring *at* her periods, just before the discharge would set in from the uterus,

or just at the close ; in either case the uterine menstrual haemorrhage was lessened, though never, I believe, entirely absent for a whole period. The haemorrhages appeared generally before a delayed menstruation. The blood was *black*, as generally spat up, and not that bright rosy hue indicative of arterial loss. Her physique was anything but that of a consumptive, although she (another point against phthisis) and her family were very much alarmed at the apparent critical condition of her lungs. Except a bronchitis, I could get no real indication of lung disease. The irregular menstrual history having been learned, I had no hesitancy in accrediting much of her cough and her haemorrhages to her then existing uterine and ovarian malfunctions. On examination I found no special tenderness in the pelvis, except over the ovaries, though the uterus was "most into the world" from prolapsus. Leucorrhœa quite abundant and the uterine cavity was inflamed and congested. The slightest probing being followed by blood. The cavity measured $3\frac{1}{4}$ inches in depth. From other similar "lung cases" that I had seen, I felt confident to assure her that on the cure of her uterine troubles her lung disease would also be cured. The treatment verified the prognosis. She had but one haemorrhage, which came on just before the flow from the uterus, while under treatment, and none since, though it has been nearly two years since she was discharged. She at this writing considers herself as well as ever, and has no symptom of lung haemorrhage. That the blood came from the lung I know to be a fact, as the last haemorrhage occurred at my office, and I took especial pains to examine the chest, and distinctly located its source, by auscultation, from the upper lobe of the right lung.

Case II. came under my charge March 15, 1875. Is a Canadian, æt. 24, married. Has a child 6 years old, and gave a premature birth (probably induced by a fall) 8 weeks before I saw her. Has been under constant care of a Doctor since, but has

been failing. Hæmorrhage has been abundant, and shreds of tissue have been quite freely passed. Great heat and pain over the pelvic viscera. This had been the history of the 8 weeks previous to my visit. I found no great amount of fever, though great emaciation. The abdomen tender over the ovarian and uterine regions. On a vaginal examination I found my patient with a double vagina, the septum having been ruptured from off the left side, leaving a flap of tissue $2\frac{1}{2}$ inches in length, by $\frac{1}{2}$ inch to $\frac{3}{4}$ inches in width and $\frac{1}{8}$ of an inch in thickness attached to the right posterior vaginal surface. The uterus was split to the roof of the vagina, the fissure corresponding to the place of attachment of the septum. The uterine cavity measured $2\frac{1}{2}$ inches in depth and was a victim of endo-metritis and endorachelitis, and the organ as a whole was prolapsed. The vagina was also congested, as also were the carunculæ myrtiformes, which were unusually large, and the posterior one had the appearance of being detached from the anomalous septum. I was unable to tell whether this partial separation of the septum took place at the birth of the first or second child; the uterus was evidently fissured at the last labor. The husband acknowledged incomplete intercourse until after the birth of the first child. While under treatment this patient had a vicarious menstrual discharge from an old tooth socket. I was careful to exclude anything that might induce a mechanical irritation of the gum before I adopted this as the diagnosis of the hæmorrhage, which was quite free. The tooth had been drawn several days (possibly weeks) before her premature delivery.

Case III. was Mrs. K., married 5 years, no children, no miscarriages. She was seen in consultation with Dr. Mulheron; her trouble was an old standing dysmenorrhœa resulting from the usual conoid cervix of the most of this class of cases. We operated, the patient being under chloroform, according to Emmet's

method, by cutting back the posterior lip and incising the uterine canal and keeping dilated with sponge tents and lint. While under treatment she had a vicarious menstruation from the tongue, partially taking the place of the uterine discharge. This, I think, was noticed for several days; upon two consecutive days anyhow.

Besides these three cases I have had two patients with nosebleedings, that showed, without doubt, a vicarious performance of the uterine functions, as both attended, obstructed or delayed menstruation; and after the nosebleedings the distress was relieved and sometimes the usual discharge immediately followed. When they occurred just after the menses, the courses had been shorter than usual.

Quoting now some authorities upon the subject, I find in Barnes' "Diseases of Women" the following: "The most frequent seat of vicarious menstruation is the Schneiderian membrane. There can be no doubt that in many cases it is a beneficial safety-valve. Certainly *menstrual epistaxis* is a quasi-physiological phenomena which should be corrected, only with great circumspection." Again: "Various parts of the alimentary canal may assume the work of the uterus. The stomach, perhaps, is the most frequently called upon. Thus we have *menstrual hæmatemesis*."

Again: "Hæmoptysis is, I believe, occasionally a manifestation of vicarious menstruation. The right appreciation of this condition is obviously of great importance, lest it be interpreted as a symptom of tubercular mischief." As coughing is one of the commonest symptoms, through reflex nervous irritation, of uterine disease, it is not at all wonderful that lung hæmorrhages are seen. I have seen nearly a dozen cases where coughing was such a prominent symptom that each patient had been thought, by the first prescribers, to be in the grasp of the direful monster,

tuberculosis. I have a marked case of this in the city, though there was never any haemoptysis. In each case the lung irritation was relieved when the uterine disease was cured. Again, Barnes says: "We occasionally see haemorrhage from the rectum; and towards middle age when haemorrhoids are not uncommon, these bleed more freely at the menstrual periods." He also says "that in several cases of pregnancy, haemorrhages have taken place from the stomach, being excited by the ovarian irritation. He also cites two cases in young ladies, where *menstrual haematemesis* had occurred. Again "the *conjunctiva* evinces a particular proclivity to pour out blood vicariously," and he details a case where monthly ecchymoses of both eyes occurred, some blood also being poured out.

Liebrich relates a case of retinal haemorrhage from suppression of the menses, and says he has several times seen similar appearances.

Barnes says the skin is not unfrequently the seat of vicarious menstruation. It sometimes being seen as petechia; sometimes oozing out in droplets, thus forming bloody sweat. He also adds that there is some analogy between these cases and *erythema nodosum*, which are not uncommon on the legs of girls suffering from amenorrhœa.

Dr. Mason, in *Edin. Med. Jour.*, relates a case of vicarious menstruation from a sore upon the cheek of a young girl, aged 13, in whom menstruation had been stopped for three years. After a time the sore healed, when the blood oozed vicariously from the skin of the face.

M. S'Andrade, relates a case of a stout Parsee lady, aged 18. At first she was very regular in her courses, but finally they became infrequent and ceased; they were replaced by bleeding at the gums (similar to my case II) and nose with haematemesis, Subsequently the function was performed normally, The same

observer has seen it from the *healthy skin* of the left *breast*, right forearm and forehead. A case occurred in St. George's Hospital in 1872 with these peculiarities: Single, never seen any Cata-menial discharge; but for three months had from time to time pain in the lower part of the back and between the shoulders which lasted a week, and returned monthly. During these attacks she had bleeding from the gums (case II) and nose. Finally the hæmorrhagic monthly symptoms grew worse, ecchymosis, blood-sweating, etc., setting in, she at last died from cough and pulmonic hæmorrhage (case I). The post mortem showed the body well developed, ecchymosis of the pleura, and lungs engorged with blood. The ovaries were *very well developed*, congested and contained a recent false corpus luteum. The uterus was absent. As Barnes observes: "There being no uterus, the menstrual fluid sought an outlet in almost every direction, and the function failing, the patient died.

Dr. Graily Hewitt gives the following cases, which I have greatly condensed: M. —, 19 years of age, single. *Hemoptysis* (case I) vicarious every two months for one day. Was cured in eight months by correcting the uterine malfunction.

In another case there was epistaxis, in a patient with scanty menstruation, for four consecutive periods. In another case, aged 31, where there was scanty menstruation, there was bleeding from the nose and mouth (cases II and III).

Dr. Fox in a note in his *Diseases of the Stomach*, details a very interesting case of vicarious hæmatemesis. It occurred regularly, ceased with pregnancy and lactation, but returned after weaning. Two cases of a fatal vicarious hæmatemesis are also spoken of.

In the *Chicago Medical Journal and Examiner*, Dr. McCord details a case of vicarious menstruation from the lungs (case I). I condense it greatly. Mrs. N., aged 40, had during her men-

strual periods for the past eighteen years at nearly every period an abscess form in the left ileo-uterine space, which always broke of itself and discharged through the vagina. The Dr. then by treatment broke up this abscess-forming diathesis, which was almost immediately followed by a vicarious discharge of blood from the lungs in connection with, or immediately following the menstrual flows.

In the June number of the PENINSULAR JOURNAL I find an extract from *La Tribune Medicale*, the case of a young lady who had for years suffered from violent attacks of hysteria. At last her menstrual flow ceased, but at the time when it should have appeared a *sanguinolent salivation* (case III) took its place.

Dr. Barrett, in the *France Medicale* for March, details a case of vicarious menstruation from the rectum that took place in a girl aged 19. This occurred every 28 days from puberty. Nothing in the constitution was otherwise abnormal. She married, gave birth to a healthy child, and after lactation, the customary rectal monthly haemorrhages set in. This continued until the second pregnancy, and then after the completion of the second lactation it was re-established. Likewise up to, and after the third period of lactation.

Dr. Tueffard, in the *Union Medicale*, gives a case as follows: A lady, aged 56, in whom menstruation had ceased since she was fifty without any of the usual more violent disturbances. In November '71, shortly after a healing of an erosion of the cervix the breasts enlarged, nipples projected, and there oozed therefrom, finally, a *bloody* discharge which lasted about one week, and which reappeared monthly down to the time of the report, 1873. The discharge was accompanied by the usual symptoms of the menstrual molimen, yet there was no manifestation of a uterine nisus or disease.

In the *Press Medicale* Dr. Basset relates a case of a woman that

had periodical discharges of blood from the nipples. The menses were not absent, but were scanty.

Something analogous to this is seen in the recent experiments of Dr. Muller upon the Chinese women in producing lactation without pregnancy. In these cases, where the artificial flow was established, the customary menses either ceased entirely, or nearly so, and were so affected during the entire time of the lactation.

Ectopic menstruation, gentlemen, is not a "new fangled notion" of these later years, since uterine specialists have come into existence, as some of the general practitioners are inclined to assert, and as we have recently heard asserted in our own Society. We have the vicarious phenomena recorded back as far as 1712 in our English medical journals, a time long antecedent to the rejuvination of gynæcology. But without worrying you by trying to fill up the gap between that ancient time and that of some (nearly) 500 years preceding our Savior's advent, I will here assent that these phenomena were well known by the ancients, and were intelligently described by Hippocrates. So common were they then to him that they were the subjects of several of his more important aphorisms, besides incidentally spoken of (a stronger argument of his familiarity with the phenomena) in other of his writings. Here is aphorism xxxiii Sect. V. "In a woman, when there is a stoppage of the menses, a discharge from the nose is good." We have almost a similar statement in a work of one of the Hippocratic treatises entitled "Diseases of Virgins." Galen, in his commentary upon this aphorism says that this adduces the propriety of letting blood in cases of sudden arrest of menstruation.

Aphorism xxxii same section reads: "Hæmoptysis (Case I of mine) in a woman is removed by an eruption of the menses." Galen comments upon this by saying that the relief is obtained by revulsion.

In Aphorism xxxvi, it is recommended to purge in cases of deficient or scanty menstruation.

Aphorism xxxix reads: "If a woman who is not with child, nor has brought forth, have milk, her menses are obstructed."

Aphorism L, reads: "If you wish to stop in the menses in a woman, apply as large a cupping instrument as possible to the breasts."

From these many cases I have cited it is fair to suppose that any organ may be the seat of a vicarious menstrual discharge of blood, when, from any cause, its place of usual exit is in any way diseased, and thereby its course impeded. Careful diagnosis, on our part, is certainly called for in *every* case of hæmphyssis taking place in a female, and above all other organs the function of the uterus should be the first that is critically examined. The prognosis of these haemorrhages dependent upon uterine malfunction is most always favorable. Proper local treatment combined with internal medication, in the vast majority of cases, not only cures the disease, but also relieves the (to the patient) frightful symptom of periodical and anomalous discharges of blood.

SOME OBSERVATIONS ON THE CONTAGIOUS NATURE OF SCARLET FEVER, AND CONCERNING THE LENGTH OF ITS INCUBATORY STAGE. By DR. CALKINS, Thorneweill, Mich.

There is probably not a person in this room that does not believe in the contagiousness of scarlet fever, and the impossibility of its originating in any other way except by contagion; and to the younger gentlemen of the profession the idea of questioning it, very likely, seems simply absurd. But this unanimity of opinion did not always exist.

There was a time within the memory of men still engaged in active practice, that the contrary doctrine was the prevalent one. It was held to be doubtful whether scarlet fever was communica-

ble at all, and if so, it certainly was not its only method of origination. It was believed to be generated, *de novo*, by some unknown epidemic influence of whose nature nothing could be even conjectured.

Among others of the greatest repute in their day, that taught this doctrine, was the celebrated Robley Dunglison, for more than a quarter of a century Prof. of the Theory and Practice of Medicine in Jefferson College, Phila., and the author of Dunglison's Medical Dictionary, and many other works, famous in their time. (See Dunglison's Practice, Vol. ii, p. 531, and Dictionary, article, Scarlatina, for statements bearing on this point.)

The principal reasons for this disbelief in the contagious nature of scarlet fever, given by those who held it, are two:

First. That the theory of contagion was inadequate to explain the outbreak of the disease in vicinities long free from it, and in which no obvious source of contagion could be traced.

Second. That the fact that in attacked families the adults, as a general rule, and a large portion of the children quite commonly escaped, was irreconcilable with a belief in the communicability of the disease.

These objections, it is easy to conclude, may have looked formidable once to a believer in contagion, but it is easy for us to see that they are, in no sense of the word, arguments at all, and that although the facts cited are as true as ever, and just as difficult to explain, the inference drawn from them, that scarlet fever is not contagious, is one of the most fallacious—a mere *non sequitur*.

It is a sufficient answer to the first to say that we neither know how far the scarlet fever germ can be transported from its birth-place, nor for how long a time it can maintain its vitality unimpaired, and its capacity to vegetate when it can find a suitable and prepared soil; and to the second to say, that we acknowledge our ignorance of what the conditions are that enable some persons, at some times, to resist successfully the invasions of scarlet fever.

It is, of course, only by accurate observations, that the contagiousness of scarlet fever is proved, and no *a priori* arguments can either prove or disprove it, but some of its analogies to other diseases render it highly probable without observations.

First. Scarlet fever is a true exanthem, and all other true exanthems are contagious. By the term "true exanthem" is understood an essential fever, attended with an efflorescence, which efflorescence is marked by well defined stages of increment, maturity and decline. Such are small pox, kine-pox, chicken-pox and measles, all which being undoubtedly contagious, what is more natural than to conclude that scarlet fever must be too? If I find a plant having close botanical relations with others well known to be poisonous, I shall be very likely to suspect *it* of the same bad quality.

Second. Scarlet fever is a disease that protects against a recurrence of itself, and all other known diseases that protect against a recurrence of themselves are believed to be contagious. Such are the diseases above mentioned, as well as whooping cough, mumps and typhoid fever. What a natural inference it is, then, to conclude that scarlet fever is contagious, too.

With these preliminary remarks on the probability of the contagious nature of scarlet fever, I will now report some observed cases of my own which seem undoubtedly to prove it, and also to show the length of its stage of incubation, and the further facts that the scarlatinous poison can be stored away and kept, and can be transported eight miles and not lose its vitality seem also to be shown.

The first series of cases in which I made accurate observations happened about six years since, and in this wise: Coming home one day I found two women waiting for me with a sick child, which I found, on examination, was breaking out with scarlet fever. There were five or six children, of my own family and of two of my nearest neighbors, at play in the yard, and as, the weather being warm, the women had sat down with the sick child on the stoop of the house, these children gathered curious-

ly around as soon as I began to examine the sick one, and before they could be warned off, one of them caught the disease. She sickened on the same day of the week two weeks afterward. Precisely two weeks from the day she broke out, a brother of hers broke out. That was the end of it, although there were eight children in that family. They moved out of the house that fall, another family coming in their place, and one of the children of that family was attacked with scarlet fever about a year after the first cases in the same house, and at a time when the disease was not prevalent. On the theory of contagion this case cannot satisfactorily be accounted for, unless we believe that the scarlatinous poison lingered in the house, and retained its vitality for a year.

Two other series of cases show a shorter period of incubation, viz., seven days. I will give them briefly:

Case 1st. Romeyn Perkins, age 12 years, came from Kansas with his mother, this spring, on a visit to friends in Attica. At the house of a relative he held a child that was sick, and whose sickness proved to be scarlet fever. It was on Thursday of the week. He took sick the next Thursday, and broke out with scarlet fever before morning, and infected

Case 2d. Hervey Walton, age four years, child of a relative at whose house he was staying. Hervey sickened on the next Thursday and broke out before morning.

Case 3d. Annie Walton, age ten years, sister to the preceding. This case was not severe enough to send for the doctor, but her father stated to me, in reply to my inquiries, that she came down in about a week.

My last series of observed cases, consisting of six, commenced in the family of Wm. Gordon, of Dryden, and embraced four children in his, and two in the family of a brother-in-law, James Smith. The Gordons have five children, none escaped ultimately, although two did so temporarily. The Smiths had four, of which two escaped the disease.

The names and ages of the Gordon children are as follows:

Clara, aged 10, Nelly, aged 8, Maggie, aged 6, Hattie, aged 4, an infant, aged 1. Clara caught the disease in some unexplained manner. She sickened on Monday, and Hattie on the following Monday. That was all at that time, except that the baby had abscesses about the neck, probably due to the scarlatinous poison, and it was hoped that Nellie and Maggie would dodge the dreaded disease, the other two children having been very sick, the anxiety of the parents was great.

Seven or eight weeks afterwards, the grandmother of the children came and took Nellie to her own home, a distance of eight miles, and on Monday. Before she left home she changed her dress, putting on one that she had worn during the sickness of her sisters. On the following Monday she was taken sick with scarlet fever at her grandmother's house.

After she had well convalesced, she was brought home on Monday, and on the next Monday Maggie sickened with scarlet fever. One of the Smith children came to see her during her convalescence, and carried the disease home with her, and gave it in turn to a sister. The incubatory stage with both was precisely a week. I have not been able to trace this series of cases farther.

It seems to be shown from it that,

First. That scarlet fever is contagious.

Second. That its most usual period of incubation is seven days.

Third. That its spores, germs or seeds can be stored away for safe keeping.

Fourth. That they can be transported a distance of eight miles (and probably much further).

Fifth. That the same person may successfully resist the invasion of the scarlatinous poison at one time, and yet succumb to it at another.

In conclusion I would remark that the public are not sufficiently alive to the danger of contagion in scarlet fever, and the medical profession, who are the conservators and guardians

of the public health and the teachers of hygiene, ought to disseminate correct ideas on the subject.

Since writing the above, I have learned that there is not so great a unanimity on this subject as I had supposed, and that there are gentlemen belonging to this society who still hold to the belief, that scarlet fever, sometimes originated from other sources than contagion.

The idea was advanced by one gentleman, that epidemics of scarlet fever, began *ab origine*, without contagion, in some instances, through the agency of some unknown atmospheric, or telluric influences, which generated a miasm, analogous to the malaria that causes the ague.

I would like to hear these views elaborated, as the conversation in which they were expressed was brief, and as I remember holding similar ones myself. At present, I am so strenuous a believer in the theory of contagion (exclusive), that the circumstance, that I used freely to express other views is a matter of regret with me.

The arguments used by the gentleman alluded to above, were those mainly, already mentioned, viz., the inadequacy of the theory of exclusive contagion to explain every case, and the fact that many exposed persons escaped, and the belief was expressed, that scarlet fever might reappear, after it had been completely and effectually stamped out from the face of the earth, and the last germ of it destroyed, supposing such a thing possible.

This idea was further stated in the form of a question, thus: Why, since we must admit that at some period in the past, before which no scarlet fever had existed, a first case or cases took place, would not the same combination of circumstances and causes, that gave rise to it then, give rise to it now? To this question there can be but one possible answer, and that is an

affirmative one. There can be no doubt that the same chain of causes and affects that become causes in their turn, acting for the same length of time, that produced the evolution of a species once, would do it again under exactly similar circumstances. If we say A, we must say B, and enquire next, what is the probability that such an event will take place, and how long a time would it probably take. If we seriously attempt to answer this enquiry, we will find that we are looking squarely in the face of, and must have a grapple with, the *questio vexatus* of the day, that of the origin of the species. Scarlet fever has the two great characteristics of a species, viz., capacity to reproduce its like, and fixity of type. It, and its congeners, the rest of the true exanthems, are species of a genus. According to the theory of evolution, the species of a genus, are the descendants of a common ancestor, and their differentiation has been produced by the operation of the two laws of variation and natural selection, until that fixity of type was produced, that gives the specific character.

The type of scarlet fever is fixed. It is as much a species as is a white oak tree. Doubtless there was a time, when there was not a white oak tree on the earth. One came into existence, somehow, either by the processes of evolution, or else by special creation and began to propagate its like. The progeny of this original white oak tree, are numerous enough now, but we never find them originating from anything, except their own acorns. No combination of circumstances or unknown influences, no force in Nature, can produce a white oak tree, except that wonderful specific force, that lies hidden in the germ of the acorn, and compels it to become, if it vegetates, like its parent tree, and never by any chance a basswood or a maple. Scarlet fever is endowed with the same specific force, and there is no instance on record, where exposure to its virus, gave rise to small-pox or measles.

Since then scarlet fever possesses the characteristics, and is amenable to the laws that governs species as far as known, what reasons have we for supposing that it varies from them in the method of its origin. For one, I would as soon believe, that a white oak tree could originate in some other way, than the vegetation of white oak acorns, as I would that scarlet fever, could originate in any other way, than the vegetation of its own pathospores.

(Explanation), I have spoken above of scarlet fever, as if it were itself an entity, instead of being the sum of the phenomena, caused by the presence in the human organism of a myriad of infinitesimal entities. This use of terms was for the sake of convenience.

Correspondence.

REPLY OF DR. FROTHINGHAM TO A MEMBER OF THE MICHIGAN STATE SOCIETY.

EDITOR PENINSULAR JOURNAL OF MEDICINE—In your August number is a letter from G. K. Johnson, M. D., of Grand Rapids, which I feel compelled to reply to, as it contains certain unfounded charges against myself, and erroneous explanations of late action of the Michigan State Medical Society.

In regard to the charges against myself, I will say that I have never “appealed from professional to popular tribunals,” nor “enlisted a hostile press to assail the State Society.”

I have never written a word for any paper or medical journal, (until my open letter to the Board of Health, published in this number of the JOURNAL,) except to correct erroneous or libellous statements concerning myself or the faculty, of which I am a member. And whoever asserts the contrary is misinformed or deliberately falsifies.

It is not I who enlisted a hostile press to assail the State So-

ciety, but Dr. Johnson and others of the sixty-three who voted resolutions "assailing" the educational system of the State, making even a friendly press "hostile," and bringing popular contempt and ridicule upon a profession whose honor and good name they ought to have maintained. When those resolutions were reported I remonstrated against their passage, declaring that before no civilized people could such a position be sustained, and the result has corroborated my statement. I was by some answered that they did not care for the opinions of the press or the people. I can only say in this connection that whoever loves his profession more than his own interests, opinions and prejudices, will labor to increase the public respect and esteem in which it is held. It is that more than anything else that determines the average of morals and intellect that enters it, and the history of civilization shows nothing plainer than that a diminished public esteem and confidence in any profession has been the unfailing prelude to its decay. If public sentiment is wrong it is our duty to educate it and set it right, and not to demean ourselves and increase the contempt it already has for us.

I also deny having "loaded the State Society with epithets, or having carried on against it a wanton crusade." Not until *it* had "wantonly" assailed my character, impugned my motives, and advertised me as an "apostate" throughout the length and breadth of the country; not until forbearance ceased to be a virtue; not until a party of men whom I deemed to be dishonorable schemers, had assumed the control of that Society in furtherance of their own selfish interests, did I arraign it before the American Medical Association for its flagrant violation of ethics, and attempted degradation of our profession. Not with malice, but with a desire to obtain from the authors of our code, a decision of the questions vexing the profession of this State, a settlement of which a year of conflict had shown to be impossible, and a continuance of which could but add to the scandal this controversy has caused to the profession. When I criticise

the State Society, I do not intend to include *all* its members, *but only those who by their inconsistent conduct have brought this discredit upon it*, and who *evidently packed* the last meeting hoping to destroy the regular medical school at Ann Arbor. The whole of Dr. Johnson's charges against me I pronounce *untrue*, and demand of him the evidence by which he would substantiate them. It is not I who have "joined hands with popular ignorance and prejudice," but Dr. J. and his co workers who have falsely accused me and others of our faculty of "aiding and abetting" homeopathy, and thus exciting "prejudice" against us.

I must also deny that the object or meaning of the resolutions was such as given by Dr. J. in his letter. He says the first resolution means that the "State Society was 'not content' with homœopathy in the University, 'not content' that it should be fostered by the State, and further, that the teaching of Hahnemannic vagaries in the University, 'is not, in our opinion, calculated to maintain or advance medicine as a science, nor is it consistent with the honor or interest of the profession.'"

Now I have the most conclusive proof to show that this was not the meaning of that resolution, *nor opposition to homœopathy* the object of *any* of the resolutions reported by the committee of which Dr. Johnson was a member. It should be remembered that two of this committee, although agreeing to present the first three of the resolutions, voted against the passage of the first and second. To the third *no* member of the Society objected.

Let us quote the resolutions entire, in order more fully to consider and analyze them.

Resolved, 1st, That we are not content with the existing situation of the medical department of the University, because in our opinion it is not calculated to maintain or advance medicine as a science, nor is it consistent with the honor or interest of the profession.

2d, That a State under our form of government cannot successfully teach either medicine or theology, and that the medical profession ought to be its own teachers, and the guardian of its honor.

3d, That we regard all legislative interference with the government of the University as unconstitutional, wrong in principle and harmful in its results.

4th, That section four of the constitution of this State Society be amended so as to read as follows, viz :

SECTION 4. The resident members shall be elected by a vote of a majority present at any regular meeting, their eligibility having been previously reported by the Committee on Admission ; provided, that no person shall be admitted to fellowship who proposes to practice in accordance with any so-called "pathy" or sectarian school of medicine, or who has recently graduated from a medical school whose professors teach or assist in teaching those who propose to graduate in or practice irregular medicine."

Now does not this first resolution distinctly state that they are not content with the "*Medical Department?*" If they meant *University*, why did they not say so? Such a confusion of terms is not to be expected by a committee the chairman of which is such a stickler for *literary* culture. No, they did not mean that they were not content with homœopathy in the University, for if they did, and *had so expressed it, there would not have been a dissenting voice in that Society*. The evidence of this I have, first, in the admission of members of that committee.

I offered to Dr. Pratt, chairman of that committee, a set of resolutions that protested against the introduction of homœopathy into the University on the ground of its being sectarian in character, and asking that all sectarianism be eliminated from the University, and was answered by Dr. Pratt that he could not entertain those resolutions ; that he did not wish to open the "*old fight*;" that "he could say nothing against homœopathy." The next day Dr. Ranney, Secretary of the Society, formally presented similar resolutions, but no mention was ever made of them by the committee, *and no word was said in their own resolutions questioning the right of the State to teach homœopathy in the University.*

I argued that on the set of resolutions that I offered, we could do battle without incurring the charge of *bigotry*.

It is contrary to the genius of our educational system to sup-

port sectarianism. It was one of the recommendations in the President's last message to Congress (then published) to so change the constitution that no State could make such appropriations as the one made by our last Legislature in support of sectarian medicine, and it has since then been incorporated as a plank in the republican platform. On this line we could have successfully fought homœopathy, without disgracing our profession, and exciting the ridicule of the intelligent portion of our commonwealth. I said, if under this principle, the regular medical department is proved to be sectarian, let it be abolished. No one will go more cheerfully than I when I see the gun "spiked" and not left for the enemy to use upon us as an engine for the promotion of error.

But no, *homœopathy was not what they were fighting*, so in effect said Dr. Pratt to me then. So afterward did Dr. G. K. Johnson himself acknowledge to me, declaring that it was the regular medical department of the University that he wished to break up. And so declared Dr. Brown, another member of this committee, and not *only* to me, but also to others, as I am informed.

For one I deny the right of any set of men to assassinate the Medical Department of the University, and I shall resist such an outrage to the extent of my ability. And if our "code of ethics" is published as a show of honorable and noble purposes, but is to be used merely as a screen from behind which to stab our rivals, the sooner it is known the better.

That it could not have been on the ground of opposition stated in the preamble, that these resolutions were framed and that the members of the society voted for them, is plainly shown by an analysis of the past and present attitude of the society toward homœopathy and other irregular medicine. The preamble states as a reason for their action the following, the italics being their own :

The present position of the Medical Department of the University and our relations to it bristle with difficulties—difficulties springing on the one hand, from the legal relations of the school to the Legislature and to the Board of Regents and, *on the other hand, from the unwillingness of the*

profession to hold any parley or make any compromise with irregular medicine.

Let us examine the history of the Society for the past few years and see how that unwillingness has been shown.

When at a meeting of the Society in Grand Rapids in 1872, a member of the Society read an able paper showing the active efforts homœopaths were taking to establish themselves in the University, and calling upon the Society to take some efficient steps to defeat their object, he was insulted by having his paper referred back to him *as unfit for publication in the transactions.*

In 1873 a committee of the State Society was appointed under the following resolution :

Resolved, That a representative committee of five members of this Society, be appointed by the President, to confer with the Board of Regents and the Medical Faculty, in respect to the relations of the Medical Department of the University, to the medical profession of the State, and in respect to the future conduct of the said department under any contingencies, necessitating a change in its organization.

This resolution was passed at the time when the question of introduction of homœopathy was under consideration by the Regents. Dr. Pratt, of and for this committee, read a long report before the Regents, prefaced with the assertion that their mission did not "regard any contingencies that might affect the *internal* organization of the medical school under their charge." Both he and Dr. Hitchcock reproved a member of this committee for making a minority report representing that the State Society objected to the introduction of homeopathy into the University.

Still more decidedly did Drs. Pratt and Johnson show their willingness to "parley" and "compromise" with irregular medicine by their efforts to secure a law preventing any *regular* from commencing the practice of medicine in this State until he had received a certificate from a Board of Medical Examiners the majority of which should be composed of *irregular* practitioners.

From the bill which they framed I make the following quotations, italics mine :

“ SECTION 1. The Governor shall, by and with the consent of the Senate, appoint nine practicing physicians of good reputation, * * * who, together with a secretary, shall constitute the ‘ State Medical Board.’ * * * *The appointments shall be made from members of the State Medical Society, the Homeopathic State Medical Society, and the Eclectic State Medical Society, in proportion to the number of their respective members.* * * * All vacancies shall be so filled as to maintain the relative proportion of members from the several medical societies, on the said Medical Board. * * *

“ SEC. 3. The Board shall appoint from its own members, a President, a Treasurer, and not more than six Medical Examiners. * * *

“ SEC. 5. The Medical Examiners shall hold examinations at least twice in each year, * * * *and shall examine all applicants for examination* who shall have paid to the Secretary of the Board an examination fee of ten dollars, as to their attainments in the following branches of learning, and no other, viz.: Normal and Morbid Anatomy, Physiology, Sanitary Science, Surgery other than medical, Midwifery other than medical, Chemistry, Medical Jurisprudence and Toxicology. *They shall cause a certificate to be issued to every person who shall satisfactorily pass the required examination.* * * *

“ SEC. 6. It shall be unlawful for any person to practice medicine, in any of its departments, in this State after the first day of October, A. D. 1875, who is not at the time of such practice, duly registered according to the following provisions of this act.

“ Any person actually engaged in the practice of medicine in this State, who shall register his name with the county clerk of the county in which his office is located, prior to the first day of October, 1875, in accordance with the provisions of this act, and *the requirements of the Medical Board*, shall receive from such county clerk a certificate of registration, by virtue of which he shall be entitled to practice medicine in this State for the period of one year from the date above specified, and any person who shall on or after the same date, present to the county clerk of the county in which his office is situated, a certificate of previous registration under this act, or *certificate from the medical examiners that he has passed a satisfactory examination before them*, shall receive from such county clerk a like certificate of registration by virtue of which he shall be entitled to practice medicine in this State for the period of one year from the date of such certificate.

“ SEC. 12. *Any member of said State Medical Board who shall violate any of the provisions of this act, or any of the By-laws adopted by said Board, * * * shall be fined in a sum not exceeding five hundred dollars, or imprisoned not exceeding three months, or punished by both fine and imprisonment in the discretion of the courts.*”

The committee appointed by the State Society to secure the passage of this bill reported their action at the meeting of Society held June 9, 1875, and can be found in full in the published transactions of the Society for 1875, p. 319, *et seq.* I gather the following facts from their report:

A meeting of the committee was called at Jackson on the 16th of December, 1874, to which the following irregular physicians were invited: Chas. Hempel and DeForest Hunt, of Grand Rapids; — Lodge, of Detroit (homœopathic); Wm. B. Church, of Marshall; R. A. Brown, of Albion; A. R. Beach, of Hudson (eclectic).

Among those who met in response to this call were Drs. Stoddard of Albion, Hitchcock of Kalamazoo, and two of the Committee of Nine, viz: Foster Pratt and G. K. Johnson. Of the irregulars, only one condescended to "parley." This was Wm. B. Church, M.D., an eclectic. At this meeting the bill was drawn up from which the above extract was made, no one dissenting to its provisions. A copy of this bill was sent to every member of the State Medical Society (regular), all the members of the Eclectic State Medical Society, and about twenty homœopathic physicians, (all whose addresses could be obtained). This committee called another council to meet in Lansing, February 5, 1875, to which, in the language of the report, "medical gentlemen of all schools, and those especially who had expressed dissent, were invited."

A special meeting of the State Society (regular), was called and held on the 11th of February, 1875, to urge the passage of this bill upon the Legislature.

The principal features of the bill above quoted, were ultimately incorporated into what was termed the "Thomas bill," and so amended in the Senate as to have the Board composed of six censors, two to be regular, two homœopathic, and two eclectic physicians. In this the State Society's committee acquiesced, and labored to secure its passage as thus amended. "In the house," they report, "it (the bill) met a flood of re-

monstrance, mainly from the homœopaths, who having already received the *lion's share in the composition of the Board of Censors*, openly opposed its passage on the ground that by its terms the graduates of medical colleges, as well as others, would thereafter be subject to examination. On the 26th of April it was tabled by its friends to save it from a worse fate." They charged the failure to the *apparent apathy* of a large share of the regular profession, and recommended the appointment of a new committee to continue the work, and on motion of Dr. Foster Pratt, such a new committee was created, and he and Dr. Johnson are still members of it, instructed to continue the same work by the society which records not one dissenting voice against the action of the old committee. In addition to the acts reported I am credably informed that several members of the society held a meeting in Detroit to discuss the above bill, at which irregulars met by invitation with them. At this meeting Dr. J. A. Brown, one of the Committee of Nine reporting an unwillingness to "parley," acted as chairman, and Dr. E. R. Ellis, a professor in the Detroit Homœopathic College acted as secretary !!

In the discussion of this question it is not unimportant to know that the men who furnished the chief data upon which the above bill was framed, and who suggested inviting these homœopaths to meet in consultation upon this bill that was to determine the standard of medical qualifications in the whole State of Michigan, were Drs. Foster Pratt, chairman of the committee of nine, and Homer Hitchcock, President of the State Board of Health, the latter of whom wrote the clause of the bill requiring the Board of Censors to be composed of members of the three State Societies. At the late meeting at Ann Arbor, Dr. Hitchcock was particularly censorious upon the faculty for occupying their positions, reminding them of that good old time when there was *honor* in the profession. If the inconsistent conduct of Dr. Hitchcock in this matter is a fossilized specimen of this extinct "honor" that *once* existed in the profession, I much prefer that more common kind still extant, and which, it is to be hoped

exists in conformity with that law which provides for the survival of the fittest.

Was "an unwillingness to parley with irregular medicine" the feeling that prompted their wanton attack upon the regular school at Ann Arbor? Is inviting them to their meetings to take part in the discussion and settlement of important medical matters, a parley? If it is not I do not know what would be so considered. Was an "*unwillingness to compromise with irregular medicine*" the cause of their action? Did they not agree to strike out all knowledge of therapeutics and *materia medica* from the qualifications which the law should demand of the physician? Did they not agree to give *a certificate* which was in effect a recommendation of medical qualification, to any homœopath, eclectic, or cancer doctor who passed a satisfactory examination in anatomy, chemistry and other branches mentioned in the above bill? Did they not offer, under penalty of fine and imprisonment, to obey all the "by-laws" of a Board, composed of four irregular to two regulars? Is this compromise? If it is not, what would be? I am finding no fault with the bill, it is a question whether it is not a wise provision to secure that kind of knowledge that is the *antidote* of quackery and visionary medical systems. What I do complain of is that hypocrisy which is shown by men, who having voluntarily held this "parley," offered this "compromise," and who having labored to secure the passage of this law, have morally committed all the acts that the bill contemplates, then advertise to the world, that "unwillingness to hold parley with or make any compromise with irregular medicine" is their excuse for a mean stab at their professional brethren, degrading their profession in the eyes of the people and giving the lie to the facts of history by a formal resolution.

Let us consider just what this Board of Censors amounted to. It would in effect be a Medical College, only with greater power than any college possesses, because nowhere in the whole State could any one begin the practice of medicine, who did not

first pass an examination and receive from them a certificate of recommendation. It would be a college consisting of a faculty composed of four irregular to two regular physicians, and in the original bill, that was drawn up by a committee of the Society, this examining board was to be called the College of Physicians and Surgeons of the State of Michigan. This bill, with the name last designated, requiring a mixed faculty, was freely circulated at the meeting in Saginaw where it was presented, and so far as I remember, but one member objected to it. It was referred to a new committee to get the bill in shape to present to the next Legislature. They, without being so instructed by the Society, changed the objectional name without otherwise essentially changing its features.

Now let us see what there is at the University that these men who made no objection to this affiliation between regular and irregular practitioners, so loudly condemn. It is not as Dr. Johnson now alleges because "homeopathy is fostered by the State," for when resolutions are offered condemning this thing, they are not entertained, and when at a meeting of these fault-finders, I offered a resolution asking the profession to unite with the medical faculty to eliminate homœopathy from the University, it was by a motion of one of these agitators laid on the table. *It is not the Homœopathic College of the University of Michigan that they are not content with.* It is the "existing situation of the Medical department of the University" that they condemn, and for the information of those not fully conversant with the matter, I will say that homeopathy is not connected in any way with the regular medical department, but is taught in a separate college, so distinct and separate that no association between its faculty and the regular medical faculty is ever required. During the past session I never met a member of the faculty of the Homeopathic College, and do not know either of them by sight. The regular faculty are required to teach nothing but regular medicine, *and are not asked to recommend the graduation of irregular physicians.* The curriculum of the regular school is not

changed in the least, and *no irregular medicine is taught as a part of it.*

It is true a portion of the faculty have in their lecture rooms some homœopathic students and some literary students, as by the system on which the University is organized there is a certain latitude allowed in the election of studies, and some of the literary students elect chemistry instead of some of the studies marked in the regular course for their class. In these cases, the professor is required to receive such student and at the close of his course of study, he gives him a certificate of his qualification in this branch. To the regular medical student a different certificate is given, signed by the dean of the faculty, stating the length of time he has attended the *full course* of lectures. When a regular medical student applies for a diploma, he is examined by each professor, but no intimation is given him as to whether or not he has passed satisfactorily, until the whole faculty have met, or sent their statement of the student's standing to the dean, and then, after comparing the votes, if no objection is made, and the average proficiency reaches the required standard, the student is considered passed, and his name is sent by the dean of the faculty to the Regents, *recommending* him as worthy of the degree of Doctor of Medicine. If he has failed to fulfil the requirements of a single professor, he cannot be so recommended, if that professor objects, unless that objection is overruled by a vote of the faculty. It will thus be seen that what the faculty does for the homœopath's student, is in no sense a recommendation of that student for the degree of Doctor of Medicine. To say a student is proficient in chemistry is not saying that he is qualified to practice. He may have learned his anatomy, chemistry, and kindred branches all perfectly, and yet, if he has no knowledge of *materia medica*, and *therapeutics*, we could not say he was qualified to become a physician. Should one of our own students, though brilliant and accomplished in all the branches we teach, have the absurd notion that ten grains of morphia was a proper dose, and avow his inten-

tion of using this remedy in that dose, we would not grant him a medical degree. Neither, while we hold our present views, could we recommend as qualified for the duties of a physician, any person who believes the doctrines of Hahnemann.

What the regular faculty do, is to teach what the regular medical profession regard as true medical science to all who come to their lectures, feeling constrained to do so by the spirit of our Code of Ethics, and every principle that should govern our profession. And I am individually of the opinion that only the most narrow-minded and degrading policy which our profession could adopt would require of us any course different from the one we took as regards our teaching these homœopathic students.

Our code of ethics forbids any secrecy concerning any invention or knowledge that is necessary in the prevention or relief of human suffering, declaring any such concealment to be "inconsistent with beneficence and professional liberality." Now, unless we admit that regular medical studies are of no "real efficacy" for this purpose, our code forbids us to make any secret of them. There was a time when the *Asclepiadæ* forbade revealing such knowledge "except to the elect," and Hippocrates bound his followers by an oath not to reveal their art to any not bound by an oath, but in modern times a more liberal policy has been declared and followed. If it were not, then should every author on regular medicine be compelled to bind his publisher to sell his work only to those bound by an oath never to lend or sell the book to an "irregular" or a student that avowed his intention to become an "irregular."

As a mere commercial policy, I do not attempt to defend the principle that shall command us to make other competing physicians more dangerous rivals, but, as a benevolent and humane profession, we are bound to ask but one question, and that is, will this knowledge contribute to the relief of suffering and disease?

The faculty have been charged with "aiding" and "abetting" the graduation of irregular practitioners by this teaching and ex-

amination of the homœopathic students, but whoever will examine the matter closely will see that by exacting the same standard of requirements in the fundamental branches that is required of regular students we constitute a *check* on their graduation. Every regular physician will admit that the tendency among irregular students is to study anatomy, chemistry, and kindred branches, much less thoroughly than regular students do, and they graduate from schools under the control of their own sect, more readily, and with less expenditure of time and money than from regular medical schools. There are but two plans for the organization of the homœopathic college in connection with the University. One provides for a complete homœopathic college, with no further study by, and qualification of, the homœopathic graduate than that demanded by a homœopathic faculty. The other plan, the one now adopted, prevents their sending out graduates that are not as well qualified in anatomy and other kindred branches as regular students are.

What a college wholly under the homœopathic control would be may be inferred from a letter which I received from a prominent homœopathic physician of this state, declaring that many of the homœopathic physicians were wholly dissatisfied with the present arrangement, being desirous of a school entirely independent of the regular department. He submitted a plan of organization, in which the teachers of homœopathic practice and *materia medica* were to occupy the larger portion of the time and have a comfortable salary of \$2,000 each, but no provision was to be made for chemistry; and anatomy and physiology, combined in one chair, was to be taught by a lecturer, with a salary of \$200, and to occupy one or two months of the student's time.

Which system should one favor in order to *facilitate* "aid and abet" the graduation of irregulars from the University? The one that gives them a separate school under their own control, requiring little or no outlay of time or study, or one that exacts a long and thorough course before they can receive their degree?

Is teaching true science aiding and abetting an error? If so the more one learns of it, the more of a humbug he must be. *Is not knowledge the antidote for error?* Is it not a fact, that any class that desires to control the opinions of the world, seeks, if it is wise, to gain control of the education of the people, *and especially the opposing parties?* Will the catholic, if he can help it, send his children to protestant schools? Will he *refuse to educate the children of heretics?* No. And if true wisdom governs the followers of scientific medicine, it will invite to its halls those who are deluded, and teach them the true science and art of healing. How was a general belief in dreams and witches driven from respectable society? By ridicule? No. Only by the dissemination of more accurate knowledge of the laws of nature that served as an antidote for these delusions. So if we would remove the dreamy absurdities of Hahnemann, we must by an extensive course in the chemical laboratory and by other correct and accurate scientific studies teach the votaries of this absurdity, how to interrogate nature and learn her laws, instead of *creating imaginary laws for her, as they do.*

Let us briefly consider the second resolution. This declares that the State in our form of government cannot successfully teach medicine or theology.

Why? Is it because there are unsettled questions in medicine about which there is controversy. If so, what can the State teach? It is not grammar or orthography. Can it be history? Can it be Latin and Greek? Can it be geology? Political science? Mental and moral philosophy? Nay. There are disputed questions in all of these and also in astronomy the oldest in the sciences. Even the same system of mathematics that declares that two parallel lines are such as would never meet, how far so ever either way, both of them be produced, proves that two parallels would meet if produced to infinity, and bases important calculations upon this assumption, and if geometers had been as quarrelsome as doctors are, they would never have progressed, but would still be fighting over that definition of a point,

which makes something and nothing of it in a single breath. Engineers and architects differ much in their estimates, and the state could, consequently, neither teach engineering or architecture; and whoever thinks the state might teach law because it is more perfect and certain than medicine, had better get once in its toils, and he would speedily return to medicine for something fixed and definite. Would it not have been more rational for a society of medical men to have offered some proof to correct the false notion that medicine is unworthy to be ranked among the sciences, than to have helped to fasten this stigma long ago unjustly placed upon it by other professions? On what fact of history did this committee base its assertion?

If the State should teach anything, it should teach medicine, for as Spencer has truly declared, "first in importance to the individual is that knowledge necessary to self-preservation." "If it be possible to perfect mankind, the means of doing so will be found in the medical sciences," was a declaration of Descartes more than two centuries ago, and the learned Whewell in the last generation said: "*Medicine is one of the greatest divisions of human culture*, and must be considered as taking in the whole of physical sciences." And still later another noted writer declares, that the "study of medicine is the one best suited to the development of the intellectual life." Does it become our profession to defame their own studies as too narrow, vague, and sectarian to be patronized by the State? Then, indeed, if the State can not discriminate what to *teach* in medicine, it can not discriminate what to *employ*. No medical charity can be sustained by the State. There can be no medical superintendent for an insane asylum, almshouse or State hospital. No State Board of Health can be maintained, at any rate in this State, since one of the duties of its Secretary, as defined by law, is to collect knowledge respecting disease, and all useful information on the subject of hygiene, and through an annual report, or otherwise, to disseminate such information among the people. The Secretary of our State Board of Health was on

the committee reporting this resolution, and voted for its passage.

Is it a wonder that an intelligent press should declare that these men forgot they were in the nineteenth century and thought they were in the fifteenth?

When the fourth resolution is considered, absurdity outdoes itself. If there was a violation of ethics, either in letter or spirit, by the admission of these homœopathic students into the lecture rooms of the regular medical department, it was Dr. Rynd, a Regent of the University, and the members of the regular medical Faculty, who belonged to the State Society, who should have been disciplined. Was this attempted? No. It would not have been so efficient in frightening students away from the regular school. Instead of this they propose to refuse fellowship with the regular graduates of the University. Why? Because they have been taught or believe medical heresy? No. Is it because they have done or declared their intention to do wrong? No. Is it because they are not as well qualified in their profession as others? No; but because their teachers had revealed our art to others than the elect, in violation of the old law, originally proclaimed by the priests of *Asculapius*, who, having turned the therapeutic knowledge they possessed into a source of revenue and extortion, proclaimed that purely commercial policy that was lately ratified by the Michigan State Society. So these graduates, who, by their own acts, only offend by sitting in the same room with irregular students, whom they never invite to sit with them, are to be ostracized by men who for the past three years have been affectionately courting irregulars with a view to a closer union.

Let us briefly consider what effect this frightening of regular students or the destruction of the regular department would have upon regular practice throughout the State and country. The homœopath would argue, and many would believe, that it was because regular medicine could not stand the comparison. It would be said when homœopaths were admitted they had only twenty

students and the regulars more than three hundred, now the regulars have *none*, but the homœopaths have a flourishing school. Does any man doubt that such a result would bolster up homœopathy, and increase, *at the expense of the regular*, the homœopath's practice. In discussing this subject, the editor of a weekly paper, perfectly neutral on the question of homœopathy, declared that in his opinion, if the "regulars" were afraid to compete in the same University with the "irregular" practice, they would act just as they did at their last meeting of the State Society.

Another editor declares that: "In this State homœopathy owes a debt of gratitude to the men who passed these resolutions." Another says: "Such action as theirs goes far to prove to the people that if either school must be abolished in the University it should not be the homœopathic." It is a good rule in morals to avoid not only evil but the appearance of evil, and it would be wise for our profession to avoid not only bigotry but the appearance of bigotry.

Some, seeing the absurdity of urging the faculty to resign, strive all the same to force them into it, by joining their assailants, giving as an excuse for their attack that the faculty should have protested.

The faculty have been protesting for more than twenty years, and had succeeded in keeping homeopathy out of the University by representing that the profession were so adverse to any false system of practice that they would not tolerate any "compromise" with irregular medicine, and that its introduction into the University, *in any form*, would be regarded as an insult to the regular profession, and alienate them from the Medical Department. Seeing that the faculty were successful, these men who had determined to ruin the school, by the report of Dr. Pratt to the Board of Regents, and the activity with which they engaged in, and gave prominence to the "Board of Censors" bill, gave the *lie* to the faculty's protest, helped homeopathy into the University, and then in derision call on them for *another* protest. Such impudence is only equalled by their passage of resolutions

declaring our position to be inconsistent with honor, and then blandly assuring us that they intended *no censure*, and that it ill-becomes us to resent their treatment!

Is it a protest these men want? The faculty made one for them and they repudiated it. Let them now make their own protests. Let their protest be worthy of liberal men, who are more desirous to elevate their profession than to aid private medical schools. Let them ask the Legislature and Regents to eliminate all sectarianism from the University, and there will again be Union in our profession, and this contest, so disgraceful, will be at an end. And, if it so be that an investigation shall prove, as the State Society in effect asserts, that regular medicine is too narrow, bigoted and sectarian, to be worthy a place in a public educational system, though in sorrow for this degradation of our science, cheerfully for *myself* will I leave a position the duties of which for the past years, by the reason of these attacks of base rivals, and defense needful for existence, have seemed to me more like Paul's fighting beasts at Ephesus than the legitimate work of a beneficent profession.

GEO. E. FROTHINGHAM, M. D.

ANN ARBOR, August 28, 1876.

*AN OPEN LETTER TO THE MICHIGAN STATE BOARD OF
HEALTH.*

HENRY B. BAKER, M. D., Secretary of the Michigan State Board of Health:

Dear Sir.—I have this day received a letter asking for information in regard to the prevailing diseases in my field of practice. I have not been engaged in practice for several weeks and consequently can give no information on this subject that would be sufficiently accurate to serve your purpose.

In view of the labor I have on hand for the coming winter, I cannot undertake to correspond with your Board, though I am in hearty sympathy with the object for which it was created.

Although opposed to the appropriation of public funds in

support of sectarian medicine, I yet believe that one of the chief duties of the State is to protect its citizens, and to cultivate and disseminate all knowledge that has a tendency to lessen disease, or promote the physical welfare of our race. This science of preventing, curing, or alleviating diseases, is known as the science of medicine, and as I understand the object of your Board, it is to cultivate and *teach* this knowledge to the people. The injurious effects of alcohol, your Board faithfully taught, regardless of the denunciations of those who declared that State funds should not be used for teaching such subjects.

At the time, I regarded the establishment of your Board as one of the triumphs of advancing civilization, and I am now grieved that any of its members should openly advocate principles that would lead to its abolishment. Or especially that your President should "deem it an outrage" to teach this art to any one who is to take into custody human life, and who, by receiving such instruction, will be better qualified to relieve and prevent disease.

Hoping that a regard for that noble principle of our Code of Ethics, which commands us to continue our labors for the alleviation of the suffering, even at the sacrifice of our own lives, and that leads us, through the labors of our Boards of Health, to remove sources of disease at the sacrifice of professional business and profit, will lead all the members of our profession, in your Board, to sacrifice prejudice, and all principles of policy that affect simply the welfare of a single class, and to educate even quacks up to "par" with the most skilful of our profession, if by so doing you can prevent the suffering of the people who would otherwise be tortured by their malpractice, I remain

Truly yours,

G. E. FROTHINGHAM.

DETROIT, August 25, 1876.

Selections and Translations.

SUNSTROKE, OR THERMIC FEVER.

Before entering upon the discussion of the clinical aspects of the subject, it may be allowable to call attention to the confirmation afforded by post-mortems recently made in the Philadelphia Hospital, as well as by recent German research, of the observation first made by myself in 1863, namely, the characteristic hardening or contraction of the heart found after death from *coup de soleil*. The results of experiments show that the early coagulation of the cardiac myosin, to which the hardening of the heart is due, is dependent upon the high temperature. The "cardiac spasm" is therefore not to be expected when the patient dies from the *after-results* of the heightened temperature, the excessive heat having been artificially removed from the body during life, whether by the use of external cold or by free venesection. Moreover, putrefactive changes occur so rapidly after death from thermic fever, that, unless the post-mortem is made very soon, the heart which has been contracted may be found relaxed. In these two factors, rather than in incorrect observations, probably exists the reason that the heart, in the accounts of autopsies upon sunstroke, has so often been reported as relaxed.

The result reached in my monograph was that there are two distinct classes of cases which have been confounded under the name of sunstroke. In the one the patient is collapsed; in the other the bodily temperature is excessive. At the Centennial grounds there have been under treatment a number of cases of the collapsed form of the disease, almost the first which I have ever seen. The severe cases occurred chiefly among persons who had been doing hard work in confined and excessively hot apartments. As a type of them may be noticed the instance of a very powerful man, who without warning fell over unconscious

in the Machinery Department. After about fifteen or twenty minutes he was carried into the hospital, still unconscious, in a state of muttering delirium, out of which he could be aroused just sufficiently to respond with a sort of grunt. The skin was wet as possible ; the pulse very rapid and feeble ; the breath strikingly cold, the temperature in the mouth being $95\frac{1}{4}$ ° F. Contrasting with this case was one of a Scottish harbor-master, also a very large, powerful man, who fell over unconscious in the Main Building, and was brought to the hospital with muttering delirium, rapid, feeble pulse, a dry skin, and a mouth-temperature which was certainly 108 ° or higher, since it was still $107\frac{1}{2}$ ° after he had been some minutes in the ice bath. It certainly is proven that in the true sunstroke the direct action of the heat is the cause of the unconsciousness. The patient just alluded to was plunged into a full bath of ice and water in nearly equal amounts, and great chunks of ice were piled about his head and neck, so that the first dawning of consciousness was the impression that he was a corpse packed away in the ice-box. As his temperature fell, consciousness was regained *pari passu*.

There is a source of fallacy in the study of the action of temperature upon the brain which is worthy of mention here. A patient is brought into a hospital senseless from *coup de soleil*. The burning temperature is reduced by a cold bath, but consciousness is not regained. It seems a natural inference that the excessive temperature was not the *fons et origo malit*. It is plain, however, that there are two sets of results caused by the caloric, —the immediate and the secondary effects. The excessive heat produces at once unconsciousness, but if it continue in action long it also causes changes in the nerve centres, which are themselves sufficient to prevent intelligence. The hospital case may have been under the influence of the intense fever for several hours before entering the ward, and, though the temperature be reduced, unconsciousness and death may be the only possible outcome of the mischief already wrought.

In the two cases just described as occurring at the Centennial

grounds, unconsciousness was developed with equal suddenness, and was accompanied by a similar delirium. It seems probable that in the collapse there is more than simple syncope,—that lowered temperature, like elevated temperature, paralyzes the nervous matter, which has been so constituted as to perform its functions upon a certain caloric level.

In my experiments upon animals, it was possible to produce every degree of fever by external heat. In examining the clinical literature of the subject, I was for a long time surprised not to find any discussion of mild cases of sunstroke. Finally, however, in examining the writings of the India practitioners I found that they recognized very clearly mild cases of the disorder, in which the patient suffered no loss of consciousness, only fever of greater or less degree, and in which the termination might be health, or might be sudden *coup de soleil*. This summer, especially upon the Centennial grounds, I have seen an abundance of such cases,—men and women complaining usually of headache and always of wretchedness, with an accelerated pulse, and a temperature of 102° , 103° , 104° , or 105° . It was found that these patients were relieved at once by the cold bath. Such cases must be frequent during long spells of excessive heat, and their true nature has, no doubt, in this country, often been overlooked. This appears to be especially the case with children. There can be little doubt that many of the cases reported as cholera infantum, enteritis, etc., are really instances of thermic fever, and are curable by treatment as such. Especially does this seem to be true of those cases in which the disease is popularly said to "go to the head." Cases of this character usually owe their cerebral symptoms either to intense exhaustion, to be treated by stimulants, or to intense fever, to be treated by cold baths. In the *Philadelphia Medical Times*, vol. v. p. 664, may be found a most valuable paper, by Dr. C. G. Comegys, concerning the cold bath treatment of infantile "summer complaint." Any one who has seen, as I have this summer, the child on whom drugs had ceased to act, and who was seemingly doomed to die,



relieved in twelve hours by enforced cold bathing every three or four hours, will grant to Dr. Comegys the credit of having introduced one of the most life-saving improvements in modern infantile therapeutics. The sudden sweet sleep, replacing, after the bath, the fretful nights and days of unrest, is a thing never to be forgotten when once seen, and the arrest of diarrhoea is certainly no less remarkable.

The diagnosis of thermic fever in the adult usually offers no difficulty. But on an intensely hot day a malarial paroxysm without chill may readily be mistaken for it. In one case I had to hold my decision; and I have seen others make the error. The malarial fever occurring on a very hot day may be greatly intensified by the heat, and the temperature, as I have seen it, mount so high as to become perilous and to call imperatively for the use of external cold.

The treatment which I have found at once successful in every case of collapse which has come under my care, consists in the use of the *hot* bath to restore caloric, and in the administration of moderate doses of whisky and ammonia internally, and especially the hypodermic injection of from 10 to 15 minims of the tincture of digitalis to restore the cardiac action. Rubbings with warm cloths dipped in tincture of capsicum, followed by the application of dry heat and wrapping in blankets, may replace the hot bath, but probably are less efficient.

In thermic fever the chief treatment is a simple one. Success depends upon its early and efficient use; the most efficient means of abstracting heat is the ice water bath. I have found in hospital practice a tendency to a routine use of this, the patient being put in always for so many minutes. This must be strenuously guarded against, every case being a study of itself, and the bath being used just long enough to reduce the mouth or rectal temperature to 100°, and no longer. After the cold bath I have found hypodermic injections of quinine seemingly of great service in preventing a rise of temperature. There is one further point to which I desire to call special attention. Af-

ter the subsidence of the first symptoms, headache, slight elevation of temperature, general distress, and sometimes decided mental hebetude, come on. These I believe to be due to a low grade of meningeal or even cerebral inflammation. Certainly I have found them to yield, in some cases very rapidly, to free blistering of the back of the neck and head, aided by small repeated doses of mercurials. In some cases a disordered condition of the abdominal viscera follows sunstroke; in this also small doses of mercurials are of great service.

One great cause of the excessive mortality of sunstroke in hospital practice is the length of time that elapses between the onset of the disease and the use of the bath. In the Philadelphia Hospital this has been in some measure remedied by supplying the ambulance with ice, and causing the patient to be stripped as soon as placed in it, and, under the superintendence of the ambulance physician, rubbed with ice.

H. C. Wood, *In Philadelphia Medical Times.*

[The remarkable results following the sub-cutaneous injection of quinine, as noticed in Indian practice, would seem to justify something more than the casual reference to this means made by Dr. Wood. "If there is anything in the practice of medicine which may be described as magical, it is the effect of the sub-cutaneous injection of quinine in sunstroke," are the words of one who has witnessed its action. Five grains dissolved in five minims of dilute sulphuric acid, to which is added fifty minims of water, are injected in different places about the shoulders.—ED.]

ARSENIC IN SKIN DISEASES.

Dr. L. Duncan Bulkley sums up an article in the *N. Y. Medical Journal* on the "Use and Value of Arsenic in the Treatment of Diseases of the Skin" as follows:

1. Arsenic, when administered in medicinal doses, has quite another action from that manifested by poisonous doses; the average dose of the former is one twenty-fourth of a grain of arsenious acid, while the smallest toxic dose is stated at two grains.

2. Arsenic in medicinal doses does not produce any slow poisoning, but has been administered for months or years in quantities a small portion of whose aggregate amount would destroy life at once. Hebra has administered a total of more than half an ounce to a single patient. The accounts of the toxiphagi of Styria are true, and arsenic is eaten by some for many years without apparent ill effect.

3. Arsenic given by a careful practitioner, in doses to be effective, need never produce any symptoms which should cause regret.

4. Arsenic is eliminated very rapidly, chiefly by the bowels and kidneys, so that the urine shows evidences of it in a few hours; no trace of it can be found on careful analysis of the body after death, two weeks after the last dose of arsenic.

5. Arsenic, therefore, does not accumulate in the system, and no fear of this need be entertained; but when it is administered in increasing doses absorption may be hindered, and when the doses become very large, active absorption of the large dose may give rise to a suspicion of cumulative action.

6. The first symptom of a full dose of arsenic, in a very large share of cases, is a fullness about the face and eyes, and conjunctival irritation and tenderness. This need not be exceeded, but may often be kept up with advantage to a slight degree till the disease yields. Before any harm is done by the arsenic, either this or a slight nausea or diarrhoea manifests itself.

7. Arsenic should always be given with or just after meals; it is often best to give it alone, or with a small amount of bitter infusion.

8. The bowels should be first well purged, and an occasional laxative will both assist the action of the drug and prevent or modify some of its unpleasant effects.

9. If the urine becomes loaded and the tongue coated, it is best to stop the medicine for a short time and give diuretics; some of these disturbances can be prevented by combining an alkali, as acetate of potassa, carbonate of soda, or aromatic spirits of ammonia, with the arsenic.

10. The most serviceable forms in which to use arsenic, named in the order of their value, are: solution of the chloride of arsenic, solution of the arseniate of ammonia, arsenious acid, iodide of arsenic, and the arseniates of iron and quinia; of as yet untried efficacy, solution of the chloro-phosphide of arsenic and arseniate of antimony.

11. The dose of arsenic, small at first, is to be increased slowly until some of its physiological effects are manifested or the disease yields; it may then be somewhat diminished.

12. It is very important that arsenic be taken very regularly and persistently, and always under the supervision and inspection of the physician.

13. Arsenic is valuable in chronic rheumatism, hence is useful in arthritic eruptions; it is serviceable in certain neuroses, as chorea and neuralgia, therefore in skin diseases with neurotic elements; and it possesses anti-malarial properties, and is consequently serviceable in diseases of the skin showing periodic symptoms, as intermittent urticaria, etc., likewise in patients with other skin diseases who have been exposed to miasmatic influences.

14. Arsenic is certainly valuable in psoriasis, eczema, pemphigus, acne, and lichen, in proper cases and when due regard is paid to the secretory organs, and to diet and other elements of general health; of less certain value in lupus, ichthyosis, sycosis, verruca and epitheliomatous and cancerous diseases; it is absolutely useless or harmful in the syphilodermata, the animal and vegetable parasitic diseases (except in rare cases), in elephantiasis Græcorum and Arabum, in purpura, true prurigo, herpes zoster, scleroderma, molluscum contagiosum and fibrosum, keloid, vitiligo, nævus, etc.

15. The only local application of arsenic which is justifiable is either one where the strength is so weak, and the extent of its use is so small, that there is no danger from absorption, which may occur when not expected, or, one of such a strength as to kill the adjoining tissue at once, and so prevent absorption, as is the case with Marsden's mucilage.

CAN "PORT-WINE MARKS" ON THE FACE BE CURED?

YES., By BALMANNO SQUIRE, M. B., London, Surgeon to the British Hospital for Diseases of the Skin, London.

Few leisons of the skin are more hideously disfiguring than the congenital "Port-wine mark" of the face. I refer to the flat vascular nævus which may so often be met with in every country, causing the greater part (often) of one side of the face to present a livid, dark crimson color, and conferring an almost demoniacal appearance on the unfortunate subject of this forbidding deformity. So many adults of all classes of society may be seen going about with this lesion in its pristine condition, that it is clear at once that nothing is commonly contrived for its relief, and a little experience of the views ordinarily expressed by practitioners on the subject suffices to prove that any attempt with this deformity is commonly regarded by the profession with disfavor. By some, the possibly uncontrollable hæmorrhage is the fear entertained, by others, the scar that would ensue from the only means that seems to be free from the objection cited—cauterization—is properly a reason for refraining. However, as I have satisfactorily ascertained, the disfigurement can be removed without leaving any trace of its former existence, or of the means employed for its removal, and that by a very simple, safe, painless, speedy, and easy proceedure.

For the purpose in view I employ a cataract needle, the head of which is made about four times the size of that of an ordinary cataract needle. With this needle I scarify the affected skin, making cleanly cut and parallel incisions over the affected area, and even also a little beyond it. The incisions are spaced apart one-sixteenth of an inch. In order to render the operation painless, and at the same time to prevent any flow of blood interfering with the draughtsmanship of the lines, I first freeze the skin thoroughly by means of Dr. Richardson's æther spray apparatus. Having performed the operation over a limited area I press on the scarified portion of the skin with the fingers for about ten minutes, gently but firmly. At the end of this time all bleeding has definitely ceased. During the pressure a piece of white blotting paper is interposed between the fingers and

the skin. The only styptic I employ is that of pressure employed as above described. As to the depth of the incisions, they should be made of such depth as nearly to divide the entire thickness of the cutis vera. Within a fortnight, if deftly performed, the operation has done its work without leaving trace of any kind save a notable and most gratifying improvement. No scars are left by it. However a precaution needs to be stated. No lateral traction must be made on the scarified skin either during or within half an hour after the performance of the operation. In exercising styptic pressure after the operation, this essential precaution must be kept in view. When, in any case, any traction has been accidentally made on the skin in a direction transverse to the direction of the cuts, they gape slightly in consequence. The gaping cuts become plugged with wedge shaped clots, and, as an invariable fact, indelible linear scars are thus produced. If traction be avoided no trace is left of the operation. Sometimes one operation alone will not suffice, a second or even a third may be required. In such cases the direction followed by the linear incisions of the first operation should be carefully remembered, and at the second operation the parallel linear cuts should be made to cross obliquely the direction of the original cuts, say at an angle of 45 degrees. If a third operation be needed the cuts should again follow a different direction, that is to say, they should cross the direction of the original cuts at right angles.

After the operation any exudation of clot or scab should be washed off carefully the next day by a soft camels hair brush and cold soap and water, followed by a soft piece of sponge wet in cold water only.

The operation conducted as above is absolutely painless. Very slight temporary swelling follows it. No permanent trace is left by it. It does its work finally in a fortnight. No haemorrhage accompanies it, nor is it attended by risk of any kind. It offers to a number of hideously deformed persons an escape from their misfortune which may be safely recommended, and confidently offered by any practitioner. The results obtained by it are at once gratifying to the practitioner and satisfactory to the patient.—*Archives of Dermatology.*

AMOUNT OF FOOD REQUIRED BY MAN.

So widely do individuals differ from each other in their capacity for food, that to construct a universal standard which would apply to every one, of the quantity of food necessary for maintaining the health of the human family under all the various circumstances of life, would be utterly impossible. It is universally admitted, however, that almost every one eats too much. Intemperance in eating is undoubtedly a most prolific source of disease. It has been said that more premature deaths have been caused in this way than by the immoderate use of spirituous liquors; and this is probably true. We find that all those who lived to old age were always very temperate in eating. Hufeland looks upon "*immoderation* in regard to the diet as the first thing which can act as the shortener of life."

Over eating is prejudicial in many ways; it overtaxes the digestive powers and thereby eventually weakens them; it prevents perfect digestion, as when the quantity of food in the stomach is too great, the whole cannot be properly dissolved and assimilated, and inferior fluids generally and crudities in the alimentary canal are the consequences; it increases the *quantity* of blood beyond the requirements of the system, while its *quality*, by reason of the assimilating and secreting functions being over strained, soon becomes impaired, and the circulation accelerated and irregular. Hence arises a predisposition to inflammatory and febrile diseases, and the body is not in a condition to resist the numerous and various exciting causes of disease.

Experiments have demonstrated that under most circumstances, from ten to twelve ounces of carbon and from four to five of nitrogenized matter, estimating it dry, are discharged from the body of an ordinary adult male every day, and it is estimated that in order to replace this loss, there is required a daily consumption of from one and a half to two and a half pounds of solid food.

Dr. Abernethy used to advise his patients to read the writings of Cornaro ; "who having naturally a weak constitution, which he seems to have ruined by intemperance, so that he was expected to die at the age of thirty-five, did at that period adopt a strict regimen, allowing himself only *twelve ounces* of food daily." It is said Cornaro was told by his physicians, when he was thirty-five years of age, that he could not live two months; but by adhering to a "strict regimen," he lived to be one hundred years old, and for over sixty years, subsisted on twelve ounces of solid food and thirteen ounces of drink per day. He took, however, with this, a moderate quantity of light wine.

It is said the Rev. John Wesley lived for many years on about sixteen ounces of solid food per day, and as he took no wine, his fare may perhaps be considered to have been as limited as that of Cornaro ; while he led, in all probability, a much more active life.

Abstinence cannot be carried thus far by every one, however, and while most persons eat more than is essential, it must be remembered that too great a degree of abstemiousness will prove injurious to both body and mind.

Each must experiment for himself, and he may soon ascertain the amount of food actually necessary for health. There is usually more danger of estimating too high than too low. Most important of all, *eat slowly*, and at the same time carefully attend to the first feeling of *satiety*, or rather of *satisfaction*, which, in the healthy stomach will be manifested, especially if looked for, just as soon as enough, or as much as the stomach can digest with ease, has been eaten. "There is a moment when the relish given by the appetite ceases," observes Dr. Phyllip. But we must not confound appetite with *taste*. And herein lies a great objection to more than one dish at a meal ; by the flavour and taste of new viands, the appetite is re-sharpened and a false desire for more food is thereby created.—(*Sanitary Journal.*)

PROPHYLAXIS OF APOPLEXY.

Dr. I. C. Walker in reporting a case of apoplexy in the July number of the *American Practitioner* takes occasion to theorize on the prevention of these seizures. He quotes from Virchow to show that the starting point of atheromatous degeneration is an inflammation of the inner arterial coat similar to that which occurs in endocarditis. He is led to infer that this inflammation is dependent on an acid condition of the blood, inasmuch as an acid condition is generally admitted in rheumatic endocarditis. He looks to a correction of this condition for the prevention of apoplexy. In the history furnished us by Sir Thomas Watson, of Dr. Adam Ferguson, we find an example from which much may be learned. He says: "The doctor experienced several attacks of temporary blindness before he had an attack of palsy, and he did not take these hints as readily as he should have done. He observed that while he was delivering a lecture, his class and papers before him would disappear—vanish from his sight—and reappear again in a few seconds. He was a man of full habit, at one time corpulent and very ruddy, though by no means intemperate, he lived freely. I say he did not attend to these admonitions, and at length, in the sixtieth year of his age, he suffered a decided shock of paralysis. He recovered however, and from that period under the advice of his friend Dr. Black, he became a strict pythagorean in his diet, eating nothing but vegetables and drinking nothing but water or milk. He got rid of his paralytic symptom, became even robust and muscular for a man of his time of life, and died in full possession of his mental faculties at the advanced age of ninety three, upwards of thirty years after his first attack."

If we learn anything from this case it is that cerebral arteries may be so frangible as to rupture under great pressure, and that additional ruptures may be prevented, and possibly the tendency to arterial degeneration stayed, and the already weakened walls

strengthened; by the regulation of the nutrition, by abstaining largely from nitrogenous articles of food and living principally on carbonaceous diet. We also learn that both mental and physical vigor can be maintained to a great age on a diet consisting exclusively of vegetables, water and milk. All this being true, how important is the study of preventing the degeneration of blood vessels, not by medication alone but chiefly by alimentation. If the doctrine advanced by Virchow be true, that an acid state of the blood favors fatty metamorphosis and atheromatous degeneration, and that the condition of the blood is the same as in endocarditis, it would appear that the way is open to prevent endarteritis and its consequences, by preventing the accumulation of the supposed *materies morbi* in the blood, by the use of agents, the tendency of which would be to maintain its normal alkalinity. Then in the management of cases in which we have cause to believe there is an inherited predisposition to arterial degeneration, from an acid condition of the blood—and it matters not whether it be uric or lactic—we have but to maintain its alkalinity by interdicting the use of nitrogenous articles of food, and insisting upon the example of the old Pythagorean, "Eat nothing but vegetables, and drink only water or milk."

ON THE PRESERVATION OF ICE AT THE BEDSIDE.

Mr. Sampson Gamgee, Surgeon to the Queen's Hospital, Birmingham, in a short article (*Lancet*, June 10, 1876) calls attention to this subject. His practice for some years has been to cut a piece of flannel about nine inches square, and secure it by ligature round the mouth of an ordinary tumbler, so as to leave a cup-shaped depression of flannel within the tumbler to about half its depth. In the flannel cup so constructed pieces of ice may be preserved many hours, all the longer if a piece of flannel from four to five inches square be used as a loose cover

to the ice-cup. Cheap flannel, with comparatively open meshes, is preferable, as the water easily drains through it and the ice is thus kept quite dry. When good flannel with close texture is employed, a small hole must be made in the bottom of the flannel cup, otherwise it holds the water, and facilitates the melting of the ice, which is, nevertheless, preserved much longer than in the naked cup or tumbler. In a room 60° F., Dr. G. made the following experiment with four tumblers, placing in each two ounces of ice broken into pieces of the average size for sucking. In tumbler No. 1 the ice was loose. It had all melted in two hours and fifty-five minutes. In tumbler No. 2 the ice was suspended in the tumbler in a cup made as above described of good Welsh flannel. In five hours and a quarter the flannel cup was more than half filled with water, with some pieces of ice floating in it; in another hour and a quarter (six hours and a half from the commencement of the experiment) the flannel cup was nearly filled with water, and no ice remained. In tumbler No. 3 the ice was suspended in a flannel cup made in the same manner and of the same material as in No. 2, but in No. 3 a hole capable of admitting a quill pen had been made in the bottom of the flannel cup, with the effect of protracting the total liquefaction of the two ounces of ice to a period of eight hours and three-quarters. In tumbler No. 4 two ounces of ice were placed in a flannel cup made, as above described, of cheap, open flannel (10*oz.* per yard), which allowed the water to drain through very readily. Ten hours and ten minutes elapsed before all this ice had melted.

A reserve supply outside the bedroom door can be secured by making a flannel cup, or on the plan above described, in a jug, and filling it with little lumps of ice; care being taken that there is space enough below the keg to allow the water to collect, and leave the ice dry. This provision will allow ice to be used during the hottest night, without the supply failing, or the patient

being disturbed—two important considerations. The real therapeutic benefit of ice is only produced in some cases by its free use, and its soothing and stilling effect must be aided by the most perfect surrounding quiet.—*Med. News and Library.*

HOW TO MAKE RAW MEAT PALATABLE TO INVALIDS.

The *Southern Medical Record*, May, 1876, copies the following from the *Industrie Blatter*: We omit the gramme and give the equivalent in English ounces. The following receipe for this purpose has been given by Ivon: Raw meat (from the loin), 8·7 oz. ; shelled sweet almonds, 2·6 oz. ; shelled bitter almonds, 17 oz. ; white sugar, 2·8 oz. ; these substances to be beaten together in a marble mortar to a uniform pulp, and the fibres to be separated by a strainer. The pulp, which has a rosy hue, and a very agreeable taste, does not at all remind one of meat, and may be kept fresh for a considerable time, even in summer, in a dry, cool place. Yolk of an egg may be added to it. From this pulp or directly from the above substance, an emulsion may be prepared which will be rendered still more nutritious by the addition of milk. Lailler prefers the following preparation: Dried raw meat, 3·5 oz. ; sugar, 1·4 oz. ; wine 7 oz. ; tincture of cinnamon, 1 oz. It is a kind of electuary, very agreeable to the palate.—*Medical Times.*

AROMATIC SULPHURIC ACID IN NECROSIS.

Dr. Ephraim Cutter reports in the *Boston Medical and Surgical Journal* a case, with cure, of necrosis of the alveolar process treated by injections of aromatic sulphuric acid, one drachm to the ounce of water. By means of a half ounce syringe supplied with an ivory tip one inch and a half long, and one-eighth inch in diameter, the acid solution was injected at first twice a day and afterwards once a day. About two drachms were used at

each injection. The syringe tip was deeply buried in the soft tissues through one of the openings. Pus would freely exude from the other openings, even from one in the top of the mouth after each injection. Tonics with a diet of animal food and unbolted wheat were administered. A marked improvement in the soft tissues occurred. In about forty days teeth which had been loose became solidly fixed in their sides. A few spiculae of bone were removed from the front of the ulvevlar process during the period of treatment.

Dr. Atkinson of New York has reported some remarkable instances of cure of necrosis by this agent used in its full strength, it is said. It hastens the disintegrating and separating process, and at the same time destroys the germs of parasitic micrographic growths in the dead and dying bone. According to Dr. Atkinson it does not act unhealthily on sound tissues, whose vital connections are unimpaired.

ETIOLOGY OF ANGINA PECTORIS.

According to G. See (*Berlin. Klin. Wochens.*; from *La France Med.*, 1876, No. 26 et seq.), angina pectoris is not dependent upon a peculiar neurosis, but upon ischæmia of the heart. As original causes may be mentioned mechanical changes in the coronary arteries in connection with degeneration of the cardiac muscular tissue, and dilatation of the cardiac cavity. By this means the coronary arteries are insufficiently nourished, and at the same time an insufficient supply of blood is brought to the heart. Occasionally, but much less frequently, purely functional disturbances in the coronary arteries are the cause, as in coughing, hysteria, etc. Actual organic lesions are, however, most usually at fault. By this ischæmia of the heart, See explains all the symptoms, as well as the cause of death. When the myocardia and, at the same time, the nerve-terminations are supplied with too little blood, pain will be caused simply from this anæmia, and this is the origin of the agony. This irritation of the

sensitive nerves excites reflexly the motor twigs of the vagus, which induces slowness of pulse towards the end of the attack, with the concluding interruption of cardiac contraction. Later, exhaustion of the vagus occurs, and following this the final acceleration of the pulse which is observed. The painful irradiations into the shoulder and arm, as well as into other parts of the body, are explained by See as the result of transmission from the nerves originally irritated to various other sensitive nerves. As remedies, See recommends strongly subcutaneous injections of morphia or enemata of hydrate of chloral to the amount of two or three grammes (30 to 45 grains). Liquor ammon. acetat, diluted with an equal quantity of water, six to eight grm. (f3ss ad fgii), is sometimes of service. See has had no experience with nitrite of amyl. In the intervals, he recommends bromide of potassium, digitalis, rest, and hygiene.—*Medical Times.*

WEIGHT OF LIGHT.

Mr. W. Crookes, *London Times*, has devised an instrument for weighing light by means of which he estimates the weight of the light of one candle at six inches distance to be 0.00172 grains. He estimates the weight of sun-light at 32 grains per square foot, 57 tons per square mile, and 3,000,000,000 tons on the surface of the earth. Which of the imponderables will next be weighed?

TYPHOID ATTRIBUTED TO VACCINATION.

A case of small pox occurred in an institution for young ladies in the Commune of Campomarone, near Genoa. Dr. Parodi, the medical attendant vaccinated 50 of the oldest students with humanized virus—10 of which were successful. Three weeks after vaccinating, 34 of the 40 unsuccessfully vaccinated were almost simultaneously attacked with typhus (typhoid ?) fever, and three died. The physician regards the lymph as the cause of the fever.—*The Doctor.*

Query.—Was the doctor quite innocent ?—ED.

ABNORMAL PRIAPIST.

Dr. Thomas Grehn, of San Francisco, reports a peculiar case of priapism in a stout, muscular, salacious negro, aged 43, and married, attended with high irritative fever. The penis was rigid, hard, and slightly curved to the left; the glands uncovered and the prepuce drawn back so as to obliterate the rugæ; the frenum to one side; very painful when moved or pressed; and it had a soft fissure or depression at the root near the pubic bone. The right testicle was atrophied, soft, and about the size of a bean; the left atrophied, tender, and drawn up into the spermatic canal. The penis was $11\frac{3}{4}$ inches from the meatus urinarius to the bulbous portion inferiorly; $9\frac{1}{2}$ inches dorsal measurement; circumference 9 inches at root and 6 inches at corona glandis. This was the third attack. The first was about ten months ago, and a few hours after connection. He was then not married and cold applications gave relief. The second attack was about eight months ago, after connection with his wife, a mulatto of eighteen years, and lasted ten days under medical treatment. The last attack has continued forty-nine days and is still persisting with unabated intensity. The patient compares the pain to that of chordee, which he had about five years previous to the attack.—*Pacific Medical and Surgical Journal, April 1876.*

*Ars, ante omnia veritas.****Editorial.***

HOMŒOPATHY IN THE UNIVERSITY.

We are constrained by the communication from Dr. Frothingham in our present number, to depart from our determination to say no more on this subject for the present, but to patiently await the decision of the Judiciary Committee of the American Medical Association, to whom the question has been referred, and whose decision will be final. The communication referred

to is, to our mind, the most complete and pungent *resume* of the whole subject which has yet appeared, and while the profession may honestly hold different views as to the wisdom of the existing relation of the medical department to homœopathy, we cannot conceive how any one, after reading Dr. F.'s letter, can exonerate the State Society from inconsistency, at least, and the moving spirits of the "Committee of Nine" from a charge of conduct more discreditable than mere inconsistency. Dr. F. has most effectually exposed the cloven foot which these gentlemen sought to conceal under the guise of professional ethics and a zeal for the integrity of regular medicine. We are charitable enough to suppose that the State Society forgot its record on this question when it passed the resolutions containing an implied vote of censure on the Faculty, at its last meeting. This supposition alone can relieve it of the awkward position Dr. F.'s letter places it in.

As showing the animus which prompts some of the disinterested (?) opponents of the Faculty's position, we clip the following from the *Richmond and Louisville Medical Journal*, and we may remark, by the way, that the Faculty have been endorsed in their action by thirteen of the leading medical journals of the country, which is a greater number than is opposed to their action, the rest of the journals remaining neutral :

"The "Detroit Review of Pharmacy" has published an extract from some secular paper, in which Dr. Jones, Dean of the Homœopathic College at Ann Arbor, denounces as a "falsehood" the statement made by the "Richmond and Louisville Medical Journal," that the homœopathic students slunk away last spring from their examination for the degree of Doctor of Medicine. Dr. Jones states that these students *all* preferred to attend a third course, and did not seek to graduate after attending only two courses. Whether this statement be false or whether that made by the "Richmond and Louisville Medical Journal" be true, the public can decide. One would not expect a fishy story to emanate from Ann Arbor, but no mischievous

"old salt" ever returned from a cruise among the leviathans and perpetrated upon innocent "landlubbers" a fiction which could bear comparison with this. *All* the second-course homœopathic students objected to taking their degree; they preferred to take instead—another course!!! a statement so absurd that no one, unless afflicted with a homœopathic supply of brains, could believe it. "The homœopathic students feared to make the issue, and slunk away from the ordeal." The "Detroit Review" so persistently publishes only one-sided statements in regard to Ann Arbor, that it is not probable it will give space to this.

As to the charge of Dr. Jones, that the regular students at Ann Arbor were so disorderly as to necessitate the presence of a police officer in the class-rooms, this Journal has the authority for saying that there never was a more dastardly falsehood. At the clinics and at the chemical lectures, attended by mixed classes, students (as they do elsewhere) often left the rooms, creating confusion and disorder, and a police officer was stationed *outside* to put a stop to this general nuisance, *by excluding all but members of the class*. That the old Faculty at Ann Arbor ever required or used a policeman in their lecture-rooms, is a falsehood of the basest character. It is somewhat surprising that the editors of the "Detroit Review" will give currency to statements which every one acquainted, even superficially with the University of Michigan must know to be false and disreputable."

AMERICAN MUTUAL BENEFIT ASSOCIATION FOR PHYSICIANS.

This association, organized under a perpetual charter granted by the state of Kentucky, has many features commending it to the profession. It too frequently happens that the physician, after a laborious life devoted to the relief of suffering humanity, is obliged to leave his family unprovided for. While he lives, his professional knowledge secures his dependents a competency, but his brain is his sole capital, and it is a notorious and lamentable fact that those who do most towards relieving others and

prolonging their lives, are themselves the shortest lived, and leave their families the most poorly provided for. The American Mutual Benefit Association makes it possible for every physician to leave behind him a comfortable legacy. It is conducted on the purely co-operative plan, and is exempt from many of the objections which are urged against associations of this nature. We have carefully examined its organization, and are convinced of its practicability. Being confined in its operations to members of the regular profession and their families, it has to cement it the strong bond of professional sympathy. A life membership certificate is issued for \$10, and in addition each member is assessed an annual fee of \$2, which after the running expenses of the association have been defrayed, goes towards creating a sinking fund, which the charter provides shall be devoted to the founding of an Orphan Asylum for the protection of the children of deceased members of the Association. On the death of a member each surviving member pays into the treasury for the benefit of the widow or heirs an average sum of \$2. The death assessment is graded according to age, thus giving the older members no advantage over the younger, as is the case in most other co-operative associations of this nature. The assessment varies from \$1 65, as in the case of members twenty-five years old, to \$3 25, as in the case of members fifty five years of age. By multiplying each of these amounts by the expectation of life at the respective ages, it will be found that all members will have paid into the treasury at death an equal amount. It is clearly shown from statements made by actuaries and "expectation of life" lists that insurance under this plan is nearly seventy-five per cent. cheaper than in a stock company.

The standing of the officers of the company, all physicians, and the favor with which the association is received in all cities where it has been sought to be introduced, are guarantees to the profession of this state of its reliability. Any information which may be desired concerning it may be obtained by addressing the secretary, Dr. R. H. Gale, Louisville, Kentucky.

We are pleased to announce that Mr. A. H. Herron has assumed the state agency for the JOURNAL. Mr. Herron is well known throughout the state as the "Evening News man." He will, during the next few months, make a personal canvass of the state, and is authorized to solicit subscriptions and collect money for us. Our patrons will find him an agreeable and straightforward business man, and we trust they will accord him such encouragement as these qualities merit.

Reviews and Bibliographical Notes.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M. D., F. R. C. P., Professor of Obstetric Medicine in King's College, etc. Pp. 576, with two plates and one hundred and sixty-six illustrations on wood. Philadelphia: Henry C. Lea. Detroit: E. B. Smith & Co.

In these days of many books one would think another treatise on midwifery uncalled for, but the most cursory examination of this work is sufficient to dispel such a thought. The author's reputation was sufficient to warrant great expectations when his forthcoming book was announced, and its appearance has caused no disappointment. It deals in a masterly way with many disputed points, and gives conclusions which it would be difficult to gainsay. It is divided into five parts, the first treating of the anatomy and physiology of the organs of generation; the second of pregnancy; the third of labor; the fourth of obstetric operations, and the fifth of the puerperal state.

Dr. Playfair may be said to represent the English school of obstetrics. He favors the belief that a certain amount of movement takes place during labor at the pelvic articulations; believes that the ovum escapes, as a rule, coincident with menstruation; prefers chloral to chloroform in the case of rigid os; would have external pressure to supercede the use of ergot in

stimulating uterine contractions before delivery, and would confine the use of the drug to the third stage with a view not only to prevent haemorrhage, but also to prevent after pains. He makes no attempt at removing the placenta until fifteen or twenty minutes after the birth of the child, but keeps up, in the meantime, constant and steady pressure on the uterus, and forbids the slightest traction on the cord. He favors the tying of the cord as soon as the child cries. In the case of perineal rupture, silver sutures should be immediately inserted. He advocates a much more frequent use of the forceps than is customary, and in this he will be sustained by all who have adopted this plan.

After discussing the various pathological theories of puerperal eclampsia, he concludes that the liability to the disease lies in a peculiar excitable condition of the system in pregnancy, a condition not unlike that in children, in whom precisely similar convulsive seizures are of common occurrence, on the application of a sufficiently exciting cause.

In the chapter on puerperal fever he gives his readers the benefit of the recent discussion before the London Obstetrical Society, and favors the conclusion arrived at as a result of that discussion, viz., that the disease is identical with pyæmia or septæmia. He believes also in the communicability of the disease, and also that a disease in the puerperal woman indistinguishable from puerperal fever may be caused by the contagium of erysipelas, scarlatina, and other contagious diseases.

The work is the most valuable acquisition to the subject on which it treats which has been given the profession in a long time, and in saying this we do not forget the many admirable treatises which have recently appeared. No practitioner can afford not to have it.

THEORY OF MEDICAL SCIENCE. By Wm. R. Dunham, M. D.

Pp. 150. Boston: James Campbell.

Under the above prepossessing title Dr. Dunham writes a book in which he essays "the recovery of the fundamental principles involved in a correct theory of medical science." We must confess to a mental obtuseness which prevents us from fully comprehending much of the author's ratiocination. For instance, "The peculiar, distinct, ultimate vital properties,

which, in the aggregate, include all there is of vital force, are made apparent to our senses through the three properties of contractility, sensation and sensibility." We are unable to understand how properties can include a force; there is a vagueness here, to our mind.

We fully agree with the statement, which the author laboriously seeks to elucidate, that there is no inherent *power* in medicine, but doubt whether we fully appreciate the proposition that "the relation of *materia medica* and *poisons* to the human organism is not one of *power*, but one of *cause*." We must be excused from a further notice of this work. There may be philosophic minds which delight in this kind of literature, and to them we cheerfully relegate the task of reading it.

MEDICAL THERMOMETRY AND HUMAN TEMPERATURE. By E. Seguin, M.D. Second edition. Pp. 446. New York: Wm. Wood & Co. Detroit: E. B. Smith & Co.

The author sets out with a quotation from E. Littré *de l'Institut de France*, "Human thermometry will render such service in families and in society that we must not tire of preaching it till public opinion will be fully aware of its usefulness." The value of the thermometer in the treatment of fever is as yet but imperfectly appreciated even by the profession; it is, however, gradually forcing itself into notice, and we will doubtless see the time when the little instrument will be the constant companion of the wide-awake practitioner, when the hand, however delicate its tactile power, will be too uncertain a guide to diagnosis.

The work before us gives full and complete instruction in all the details of thermometry. It also points out the significance of increased temperature in the various diseases in which this symptom markedly influences the prognosis. It is the only thoroughly systematic treatise on the subject, by an American author, at least, and notwithstanding its somewhat ponderous style, which may be excused by the thoroughness in which the subject is treated, it supplies a want which the minute observer must have felt for a guide in this important field.

METEOROLOGICAL OBSERVATIONS for August, by C. HENRY LEONARD, M. D., Observer for STATE BOARD OF HEALTH.

BAROMETER.—Highest, 30.238; lowest, 28.679; range, 0.659; average, 30.002. Higher every way than last month; and the mean higher than the means of 1872-'73-'74.

TEMPERATURE.—Highest, 87 on the 13th and 31st; lowest, 46; average, 41; mean, 72.1, only nine-tenths of a degree lower than for last month. The highest temperature this July was *lower* from three to six degrees than the highest for the Julys of 1872-'73-'74; but higher than the July of 1875 by three degrees. The monthly daily mean was higher than ever yet received. The day of greatest absolute humidity (*i. e.* of most "oppressiveness") this month *did not* correspond to the day of highest temperature; still further bearing out my hypothesis made last month, that it is the amount of moisture in the air, and *not*, primarily, the elevation of temperature, that marks the increase of our abdominal troubles, especially in children. I think I have enough data on hand now to establish this fact; but I am waiting for still further developments. It may be interesting to know that my work upon the data furnished me by the Chief Signal Officer of the United States Army, for the New York City Station, and the Board of Health Reports from the same place, still leads me to this same conclusion. With but one or two exceptions, quite easily explained, the recent infant mortalities in that city, *mark the days of greatest absolute humidity*, rather than the *days of highest temperature alone*. Of course quite high temperature is necessary for *great* absolute humidity; but the *days of highest temperature* are *only* the days of highest humidity.

WINDS.—Prevailing direction, S. W., as for the last two months. Greatest velocity, 15 miles per hour; total number of miles traveled, 3,346, almost 1,000 miles less than for last month. At four observations there were "calms." These were the 9 A. M. S., on the mornings of the 5th, 13th, 28th and 29th. There has been the least amount of winds this month (by from 1,000 to 2,000 miles) that there has been since 1871; 1872 was the highest; there were 5,306 miles then traveled.

CLOUDS.—Clear days, nine; cloudy, seven; rainy, 15; a gain of three rainy days for this month over last; though this has been a *dry* month in comparison with last.

RAINFALL.—Greatest daily, 1.09 inches; this was on the 11th. Total for the month, 2.46 inches. The month rainfall for 1872 was 2.60 inches; for 1873, was 0.29 inches; for 1874, was 2.11 inches; for 1875, was 6.04 inches.

MOISTURE.—See also temperature. The 6th, 10th, 13th and 14th were the days of greatest absolute humidity; eight grains, or more, per cubic foot of air, being present at one or more observations on those days. These correspond to the days of greatest "oppressiveness," I give you the *daily mean* temperature of these days so you can see how *wide* the variation, yet the amount of absolute humidity was very nearly alike in those dates: For the 10th, it was 76.2 degrees; for the 13th, 0.79; for the 14th, 78.2. The *highest* temperatures for the same dates were respectively, 85, 87 and 84 degrees. Many days were higher than 84, yet with a great deal lower absolute humidity.

OZONE.—Comparatively *absent* this month. On only *one* day, (the last of the month) was the paper colored to one of the scale. There were "traces" on about three-quarters of the days. This corresponds—in amount—with the monthly averages for August since 1872, as reported by Dr. Kedzie. August is the poorest in Ozone of them all.

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Original Communications.

A CLINICAL LECTURE ON THE TREATMENT OF CROUPOUS PNEUMONIA—(Second Lecture). By A. B. PALMER, M.D., Prof. of Pathology and Practice of Medicine in the Department of Medicine and Surgery in the University of Michigan.

GENTLEMEN.—In a former lecture I called your attention to some cases of common pneumonia which were successfully treated—which seemed to have been remarkably influenced—in fact, *aborted*, chiefly by quinine, an article of the *Materia Medica* which, not many years ago, would, by most practitioners, have been considered a very inappropriate remedy for any form of inflammation or symptomatic fever, particularly in its early or acute stage.

Every one acquainted with the history and present state of medical opinion and practice is aware that scientific medicine is based upon observed facts, (the foundation of all science) that it is progressive—is constantly changing as new facts are brought to

light; and these changes will continue to occur until all truth pertaining to the subject is discovered, which, I fear, will not be the case while human beings are in their present imperfect state.

Those "systems" and dogmas making the loudest claims to infallibility, are, as a rule, most absurd. To mention no others, Hahnemann's pretended universal, "fixed and infallible law" of *similia similibus*, applicable always, and excluding every other therapeutic principle, is not only in itself absurd, but necessarily carries with it such a train of absurdities (infinitessimals, potencies, etc.), as to become an insult to the human intellect, and a stench in the nostrils of a sensitive profession.

The true physician "lives and learns," and the true profession, which is made up of true physicians, advances and improves by observations of facts, by inductions from such observations, and by rejecting what enlightened experience and logical inference will no longer sustain.

It was said of the Bourbon monarchs of France, that they "learned nothing and forgot nothing"—their ideas and their practices being always the same; and in medicine as in government, improvements are effected, not merely by learning the new, but by forgetting the old—by at least ignoring many things which were learned amiss.

Within my memory quinine was spoken of as a *tonic* only, the same as alcohol is yet so often spoken of as simply a stimulant; the effect of the first being supposed to increase vital actions and animal temperature more slowly and permanently, while that of the second increased these actions and this temperature more speedily but transiently.

It is of course now known that quinine has far other effects than simply to increase action and temperature; that when given in decided doses it most markedly diminishes temperature and abates and otherwise modifies various vital actions; and that alcohol also diminishes temperature much more frequently and characteristically than it increases it, and paralyzes activities much more frequently and characteristically than it excites them.

Some physicians, it must be acknowledged, have much of the Bourbon spirit in them, in the sense, if in no other, of not forgetting the errors in which they have been indoctrinated.

The different forms of pneumonia and their respective phenomena it is not my purpose now to discuss in detail. The whole subject will be presented in the systematic or didactic course. I propose now to allude to such points only in the pathology and symptomatology of the disease as shall make intelligible what I wish to say on the subject of treatment, and particularly on the treatment by *quinine*.

“Croupous Pneumonia,” says Juergensen, “anatomically considered, is an acute inflammation of the alvioli and bronchioles, in which a [corpuscular and] fibrinous exudation is poured out upon the free surface of the mucous membrane and there coagulates.”

In the first stage, histologically, the blood vessels are engorged, the capillaries project far into the alveoli, narrowing them, and the effusion of an albuminoid matter and blood begins.

In the second stage, that of hepatisation, the alveoli are filled with a fine net-work of fibrin in which are imbedded an abundance of leucocytes, or white blood corpuscles and some red blood discs, and some cells with nuclei. The capillary vessels are distended and filled with blood corpuscles, packed together and flattened. The same material found within the alveol fills the small bronchi more or less.

In the third stage pus corpuscles are found abundantly in the same situations, derived in part from the white corpuscles, and in part from the epithelial cells of the alveoli.

But pneumonia does not necessarily go through with all these changes. Resolution may occur during or from the first stage, and the earlier the resolution occurs, the less permanent the effect of the disease.

Left to itself some cases of the disease will spontaneously terminate in the stage of inflammatory engorgement, others will go on to exudation and hepatization, while others will go through

all the stages, and portions of the lung may be involved in gangrenous destruction.

These facts it is most important to bear in mind in determining the effect of treatment, and many observations may be necessary to establish the value of any mode.

The question may very properly be raised whether pneumonia is a strictly local disease—whether the symptoms of fever, etc., are due to the anatomical changes in the lungs, or whether the fever and the local lesions depend upon a common cause, a specific morbid agent, operating upon the system at large and producing the lung lesion as one of its results? Does it, like the specific fevers, tend to run a definite course, or does it more resemble accidental or traumatic inflammations, which are more variable in their duration?

Juergensen, the author of the article in Ziemssen's Cyclopœdia, contends that "croupous pneumonia is a constitutional disease, not dependent upon a local cause, but upon a peculiar morbid agent, the disease belonging to the group of infectious diseases."

I shall not now enter upon this discussion, but will simply remark that though it does tend to a somewhat regular course, it is not nearly as uniform in that course as those diseases which are by all acknowledged to be infectious; and I will also state what all practitioners have observed, that those diseases which are as generally acknowledged as non infectious and accidental and local, such as peritonitis, for example, tend to pursue a course, not entirely regular, to be sure, but still presenting a somewhat definite period of accession, effusion, and subsidence.

A more important question is whether this disease, like smallpox, measles, etc., must run its course, the sole object of treatment being to carry it through, or whether we may aim at its arrest with a reasonable prospect of success.

This question cannot be answered by any *a priori* reasoning, but must be determined by experience. Even if its infectious and specific nature be admitted, it does not follow that it cannot

be cut short, for malarial fevers must be regarded as infectious and specific—depending upon a peculiar poison and running a specific course, and yet no diseases whatever are more capable of being arrested. Indeed, there is more hope of the ultimate complete control of diseases produced by poisons than of any other class; for if the poison can be discovered and neutralized or destroyed, or its effects antidoted, that control will be established. We know, as yet, of no direct antidotes to the poison of the contagious and non-recurring fevers, but such discoveries may be reserved for the triumphs of the future.

The question I repeat, and it is determinable only by experience, Can croupous pneumonia be cut short—arrested in its course, and should our efforts be directed to that end, or is it a disease which must necessarily run its course (so far as concerns any means at our command), and should our efforts be directed, as is the case with small-pox and measles, to conducting it to a safe natural termination?

On this question there are differences of opinion. Juergensen declares, in emphasized types, that "Nature cures, and the only duty of the physician is to maintain life until the cure is effected." This, he contends, is a general principle in all acute infectious diseases, "and is applicable here unconditionally."

In reply to this it is only necessary to say that the principle does not hold good in the case of the malarial or periodical fevers, and that it is not yet established that pneumonia is an infectious disease, and I repeat that experience must determine whether it can be arrested or not.

Now, gentlemen, I do not wish to give my experience any undue weight; it has not, perhaps, been as large as Juergensen's, but it has been under far different circumstances, and it may have been quite as varied; and at all events, it is my duty to express to you my convictions, based upon sufficient experience to leave no doubt in my mind. I have in the preceding lecture on this subject given you a few of the cases upon which my opinion is based. You will judge of the force and tendency of those

cases. I must say, then, and in this opinion I by no means stand alone or unsupported by high authority, *that many cases of pneumonic may be cut short by therapeutical means—may be aborted.*

Whether a particular case can be arrested will depend much upon the period of its progress—upon the stage of the disease when the treatment is commenced. If treated in its earlier stages, before the more decided anatomical changes have occurred, a large majority of the cases such as I have met with, may be arrested or very materially cut short.

Pneumonic fever is not of an obstinate type. This is admitted by Juergensen. There are, in fact, several articles of the *ateria medica* which, when properly used, have the power of aborting or very materially abbreviating the course of the disease. They are agents which make a strong impression upon the nervous, and through it, upon the vascular system, and which in other cases have a tendency to abate feverish heat, to arrest the pyrexial state, and which at the same time relieve congesion, modify the exudation of leucocytes, determine to the surface and eliminate, especially from the skin. Many believe that free doses of veratrum viride have that power, others have equal faith in aconite, others in gelsemimum, some in free doses of alcohol. There is testimony in favor of the abortive power of all these articles.

For many years I have been in the habit, when called to a patient with pneumonia within twenty-four hours after the chill, of giving a free dose of an opiate, say one-third of a grain of a salt of morphia, generally adding a grain or two of ipecacuanha, or giving eight or ten grains of Dover's powder with a fifth or a quarter of a grain of morphine, usually at the same time giving a few grains of blue mass to modify the effect upon the abdominal secretions—these or similar doses to be repeated from one to three or four times, keeping the patient under the soothing and relaxing—under the narcotic effect, generally in a state of free perspiration, for twelve, eighteen, or twenty-four hours; usually following these doses, after their effects subside, by a cathartic.

This course has generally arrested the inflammatory process and the fever, or rather, perhaps, the fever and the inflammatory process. Rest for a very few days, with the use of some gentle eliminative, has completed the cure. But in order in this manner to be successful, the treatment must be *early* applied. After exudation and other anatomical changes belonging to a later stage have occurred, the same success is not likely to follow, and when apnæa from mechanical obstruction to respiration is decided, a full narcotic may be dangerous, or possibly fatal. But I have never known any serious consequences to follow in any case where I have given the opiates.

For the last eight or ten years where I have first seen the patient later in the disease, or where this opiate treatment has failed to arrest the inflammation, I have resorted to quinine, often combined with an opiate; the quinine in from four to six grain doses once in from three to six hours, or in smaller doses more frequently repeated; and lately I have given the quinine as soon as called.

Many years ago I had observed that when pneumonia occurred during the progress of a malarial fever requiring anti-periodic doses of quinine, the medicine would not only arrest the fever, but generally the pneumonia as well. I then supposed that in these cases the pneumonia depended upon the malarial fever, and that when the fever was arrested, or the poison antidoted which caused the fever, the pneumonia ceased because of this dependence, not supposing that the quinine had any curative power in the disease independent of the malaria.

Several years since Dr. H. Upjohn, sen., now of Kalamazoo, Mich., assured me that quinine would interrupt the course of pneumonia whether accompanied with malarial fever or not, and urged very strongly the trial of the practice. His method was to commence with the quinine on the third day of the disease, if I rightly remember, and he preferred, I think, to commence late in the evening, as he thought at that time there was some remission of the fever, and the quinine then acted more efficiently.

His particular method was to give two grains every hour until six grains were given, giving three hourly two grain doses, and then two grains every two hours until twenty-five or thirty grains were administered, when it was to be suspended, pursuing afterwards an expectant course. Dr. Upjohn's testimony, very earnestly and emphatically given, was to the effect that in a short time—a very few days at most—all characteristic symptoms subsided, and the patient rapidly and completely convalesced.

If called at a later period of the disease, he gave the quinine in the same manner without delay, and if thus given once the disease was not arrested (an occurrence seldom witnessed), in a day or two the same course was repeated.

Remembering the effects I had so often witnessed in malarial complications, I was the more ready to try this plan, and I must affirm that the results justified the statements of Dr. Upjohn as to its success.

I was not, however, particular as to the time of commencing the remedy, and I soon got in the way of giving larger doses not so frequently repeated, giving from four to six grains at once, and repeating in from two to four hours, obtaining and maintaining the now well known *antipyretic* effect of the quinine, and continuing this with its diaphoretic effect for at least twenty-four hours, or until half a dram, more or less, was given. This, substantially, and as illustrated by the cases already in the previous lecture detailed to you, has been my practice and my teaching for several years past, and with results in practice such as I have already sufficiently stated.

Soon after I commenced this method of treatment the doctrines respecting the antipyretic and antiphlogistic effects of quinine, now so prominently set forth in the works of the German physicians, especially in those of Liebermeister, Juergensen, &c., began to be more fully presented, and now it can no longer be regarded as heterodox to advocate the use of quinine in pneumonia.

But Juergensen, though advocating very strongly the use of

quinine in pneumonia in antipyretic doses for the purpose of rendering the disease milder and enabling the patient to endure it, does not admit that it is capable of arresting its progress.

It must be borne in mind that this eminent gentleman's practice has been chiefly, if not exclusively, in large German hospitals and in consultation practice, and that therefore he has seldom seen patients in the earlier stages of the disease; and in the later stages when the more decided anatomical changes have occurred, time will of course be required for the removal of those conditions, and the disease cannot then be brought to a speedy conclusion.

Still, in these cases the quinine is of great service, relieving congestion, *diminishing the production and migration of leucocytes* (an effect of quinine now generally acknowledged), and what is quite as important, abating markedly the feverish temperature and enabling the patient to endure the disease.

My chief object in this lecture has been to bring forward the *abortive treatment of pneumonia by quinine*, and the length of the remarks already made will prevent my considering the subject of the treatment of the disease by other methods, or of discussing the use of other remedies where the quinine has been resorted to. If the remedy should fail to do all that is claimed for it in any given case, we have still all the other resources which experience has sanctioned.

I wish you to distinctly understand that quinine and opium are *not the only* remedies required in all cases of pneumonia, or that there are not other very important indications to be fulfilled by other means. There are cases of great fullness of the vascular system, or of intense congestion of the lungs and brain where the lancet might be most imperatively demanded; others where cardiac stimulants may be called for; others where expectorants and sorbifacients may be indicated; very frequently the secretions need correcting, and always the diet, the ventilation and temperature of the room, and all the surroundings of the patient will require care.

The cold bath, the Germans especially, are now making extensive use of for reducing the high temperature, which they regard as the chief source of danger; and as a substitute for, or adjunct to, the antipyretic effect of the quinine, it is worthy of the most careful consideration and of a judicious trial.

In conclusion, let me say that if the quinine and opium treatment which I have brought to your notice fails in the early stage of the disease, and it becomes obstinate and protracted; if profound anatomical changes occur or important complications arise, you will have at your command all the other resources of our art.

In the didactic lectures these resources will be brought to your notice.

*NOTES OF CASES TREATED AT THE CLINIQUE OF THE
UNIVERSITY OF MICHIGAN, By Professor DONALD MACLEAN,
M. D. From the graduation thesis of J. M. LEWIS, B.S., M.D.*

Large ulcer treated successfully by simply dressing and skin grafting.

L. V. T., aged 40, from Eaton Rapids, presented himself at the clinique Dec. 15th, 1875. *History:* Patient states that while engaged in blasting he sustained a compound fracture of both bones of the left leg about the middle. The exposed ends of the bones were resected and the fracture adjusted. Union took place rapidly, so that in a few weeks he was able to use his limb. At the point of fracture, however, a sinus remained which continued to discharge, and through which several small pieces of bone escaped. From this point ulceration of the integuments occurred from time to time, necessitating complete rest and careful dressing, by which means cicatrization was several times obtained. For the last two years the ulceration at this point has been more obstinate, so that in spite of all possible care, and in spite of innumerable methods of treatment it has gradually increased in all directions until at the time of admission here the ulcer measures *seven and three-quarter inches in length*, and ex-

tends laterally so as to involve *three-fourths of the circumference of the leg.*

Besides their vast dimensions, Prof. Maclean directed special attention to the following characteristics: The surface of the ulcer appears as if irregularly gnawed out, the granulations are pale in color, indefinite in form, tall and flabby. The discharge is profuse in quantity, but is thin and watery, greenish in color, of very foetid odor. The edges are elevated, irregular, soft, and oedematous. The surrounding tissues are comparatively healthy. These characteristic features served to place this ulcer in Class II. of the classification adopted by Prof. Maclean, viz: "those ulcers which do not heal owing to defective action," and in the sub-class "*Weak.*"

TREATMENT—*First, constitutional*: Rest, generous diet, ferruginous tonics. *Second, local*: Stimulating lotions, such as *lotio rubra*, etc., applied with lint and oiled silk, (the lint being cut to the precise size and shape of the sore, saturated with red wash and applied, and the oiled silk placed over the lint, and large enough to extend beyond it in every direction), firm and uniform bandaging, and lastly skin-grafting.

January 4th. The appearance of the ulcer is very much improved. Its extreme length is now $5\frac{1}{4}$ inches, and laterally its extent is reduced to about one-half the circumference of the limb. The edges of the sore are now precisely on a level with the granulations, and the latter are bright red and well formed. The discharge is free from odor and is normal pus. Four of the five grafts which were inserted a week ago have taken root, and are now active centres of cicatrization. Several additional grafts similar to the former ones, viz., of almost microscopic dimensions, were to day introduced in presence of the class.

January 15. The first crop of grafts are now as large as five cent pieces. The second crop are doing well, so that the surface of the ulcer is studded all over with little islands of integument. The total length of the ulcer is now barely five inches, and the breadth is proportionately diminished.

"Blue wash" prescribed in the place of the red, which seems to be losing its effect to some degree. The dressing is now applied in such a way as to permit the islands of engrafted cuticle to project through it to the surface.

January 29. Doing well in every respect. Red wash resumed.

February 5. Length of ulcer $4\frac{1}{2}$ inches.

February 19. Length of ulcer, two inches.

February 21. Most of the islands have met with and grown into each other and united with the external edges, so that there is hardly any of the original ulcer to be seen. *Patient dismissed.*

TUMOR IN SUPERIOR CAROTID TRIANGLE — REMOVAL — SECONDARY HÆMORRHAGE — RECOVERY. — F. L., æt. 62, from Lowell, Michigan, a practicing quack of the homœopathic species, applied at the clinic January 16, 1876, on account of a tumour of thirty years growth, which commenced as a small, hard swelling, immediately below the angle of the jaw. Patient associates the origin of his tumor with the extraction of a tooth. For several years the tumor remained small and unimportant. On enquiry patient states that he has a sister who is affected with a precisely similar tumor. He also states that, at the autopsy of his late brother, a hard cartilaginous tumor was discovered, situated between the stomach and spleen.

Present condition. — The tumor is situated near the angle of the jaw, extending upward towards the mouth, forward to within an inch of the symphysis; its lower margin is on a level with the thyroid cartilage, and its deep surface is in relation to the carotid vessels, so that the whole tumor moves with the pulsations of the artery. Patient states that it is the source of numerous painful symptoms, one of which is great difficulty in swallowing, caused, no doubt, by the pressure of the tumor on the nerves of deglutition. The tumor itself has never been tender to the touch.

Operation. — Chloroform was administered and the tumor dissected out. It was found adherent in all directions, necessitating a prolonged and cautious dissection. A considerable number

of arteries were divided, but none of any great importance, and the patient lost very little blood. For twenty-five hours after the operation all the patient's symptoms were favorable, but at this time, owing to improper movements of the patient, one of the ligatures became detached, and pretty rapid haemorrhage took place. The wound was at once opened up, and the bleeding point secured.

From this time the case made rapid and perfectly satisfactory progress, so that at the clinic on February 5 the patient was able to present himself with his wound healed and all his disagreeable symptoms entirely cured. He was able, in presence of the class, to drink a whole tumbler of water without difficulty, a feat which for many years he had not been able to perform.

Proceedings of Societies.

*INTERNATIONAL MEDICAL CONGRESS.**

First Day. This congress, the members of which consisted of representatives from a large number of foreign medical bodies, together with delegates from the principal medical societies of this country, convened in the hall of the University of Pennsylvania in Philadelphia, at noon on Monday, Sept. 4th. There were present upwards of five hundred gentlemen, including delegates and invited guests. After prayer, Dr. S. D. Gross proceeded to deliver the Address of Welcome. It would be impossible in a mere abstract to do aught like justice to this model of eloquence and appropriateness, and we shall only quote a portion which illustrates the changed views concerning American literature entertained by Europeans during the century of American independence:

* The following report is compiled from those appearing in the various medical journals which had reporters present, and from an admirable *resume* of these reports in the *Virginia Medical Monthly*.

"In organizing the Congress, the Commission might have been guilty of undue partiality toward their own country; but if this was so it was because of an irresistible desire to show the world what the century since the establishment of a free and sovereign government of the people had accomplished for scientific medicine. Time was, when we were wholly dependent upon our European brethren, especially the English, whose language, practice and habits we made our own. The poverty of the country in these respects cannot be better illustrated than by the fact that we had no native works on medicine and the collateral sciences until after the commencement of the present century. Many will recall the words of the great English lexicographer who, in 1769, in speaking of the American colonies, exclaimed, 'Sir, they are a race of convicts, and ought to be thankful for anything we allow them short of hanging.' The Abbe Raynal, writing in the latter part of the last century, declared that America had not produced a single man of genius; and the exclamation of a celebrated Scotch reviewer, uttered at a more recent period, 'Who reads an American book, who goes to an American play, or who looks at an American picture?' is still fresh in the memory of many. The discourses which will be delivered on the progress of American medicine will serve to show that the profession of the United States is fully abreast with all the other pursuits that adorn the human mind and shed lustre upon the scientific character of the nation. They will serve to show that we have passed the period of medical provincialism, and that we stand upon a lofty platform, to which we need not be ashamed to invite the representative men of the profession of foreign countries.

"It has often occurred to him that if these international reunions were more frequent and more largely attended, they would be a vast deal more serviceable in preventing war and

international misunderstandings than any arbitrations that could be inaugurated for the settlement of international difficulties. Much of the pleasant feeling at present existing between the United States and Europe is due to the enlarged intercourse which has been going on since the invention of steam navigation, and the consequent interchange of hospitality and courtesy between the two countries."

At the close of the address, Dr. Gross appointed a Committee on Nominations for permanent officers. This committee presented a report, which was unanimously adopted, in which the following, together with a large number of vice-presidents and chairmen of sections were nominated: President, Dr. S. D. Gross; Secretary General, Dr. I. Minis Hays; Treasurer, Dr. Casper Wister.

While the Committee was in session, Dr. Austin Flint, of New York, delivered an "Address on Medicine," in which, at great length, he showed the progress made by medicine during the past century. One hundred years ago there was one medical school in Philadelphia and one in New York. The Revolutionary war called out the medical energies of the colonies, but arrested medical teaching for some years. After the war, Franklin interested himself in founding the Philadelphia Medical College, which, in 1791, was merged into the medical department of the University of Pennsylvania, and was modeled after the school Edinburgh, and that after the Leyden school. All the professors of the Philadelphia school had been educated in Edinburgh. Rush was then the leading American medical mind. He wrote original treatises and edited foreign works.

About 1800, there were 20 medical schools and 2000 students in the United States. Six of the schools were in Philadelphia, New York, and Boston. The remaining 14 provincial colleges developed inquiry among physicians in their neighborhood and

incited them to become teachers. There was great jealousy among schools at this time. The first two graduates from Harvard met great opposition, and received their diplomas only through the influence of Dr. John Warren.

At this period there were twenty medical journals. Even now their number is only doubled. Locally they are generally in the interest of some particular school, but they are useful in distributing medical intelligence. In referring to the *American Journal of Medical Sciences*, the speaker asked : "Without any disparagement of the numerous able and useful periodicals published during the last half century, may we not with a feeling of pride refer especially to a journal which, with such a history, is now the oldest living representative of medical periodical literature, and which has probably a circulation larger than that of any other in Europe or America ?

The profession in America have ever been fraternal. Even the late war did not disturb the strong feeling of friendship between Northern and Southern medical men.

Dr. F. mentioned Cullen as the strongest pathologist at the close of the last century. Following him came Rush, then Good, each having an original system ; then Brown, of Edinburgh, the opponent of Cullen. There was at this time no leading system. In 1801 Valentine Seaman, of New York, began vaccination. In 1817 the *Pharmacopœia* was projected, and published in 1820. In 1846 anaesthetics were first used in Boston, and afterwards introduced into England and the Continent. In 1829 the first native work on pathological anatomy was published by Horner, and later Gross's work appeared.

Dr. F. next referred to auscultation, making honorable mention of James Jackson in connection with the discovery of the significance of prolonged expiration ; also of Dr. Holmes as having taken the Boylston prize for an essay on auscultation. In

the diagnosis of heart diseases American physicians were aided by the works of Hope, Andre, Stokes, and others; Bowditch and Gerhard also made us familiar with this science.

In the second quarter of the 19th century, Hays' *American Journal of the Medical Sciences* first appeared, promising translations of foreign medical intelligence, and valuable original articles. It has fully kept the promise. Dr. F. then made flattering mention of the earnest and prolonged experiments of Beaumont upon St. Martin. Broussais's works, translated by Hays and Griffiths, won many disciples to Broussaisism. This last of the legitimate *isms* has given way to illegitimate *pathies*. Cook believed congestion of the liver to be the *fons et origo* of all diseases. Alluding to the Kentucky practice of giving huge doses of calomel in affections of the liver, the speaker told a story of a yeoman, who, while plowing his field, came upon a quantity of metallic mercury, and supposed he had struck a mine of wealth. He became quite chop-fallen when told that he had simply ploughed up the spot formerly used as the burial-place of patients who had been subjected to mercurial treatment.

Jacob Bigelow, in 1835, struck the key-note of change in treatment in his work on Self-Limiting Diseases. Polypharmacy and heroic measures fell into disrepute. Physicians became more reserved and humbly changed to servants of nature. In 1833 appeared the United States Dispensatory. In 1847 the American Medical Association was inaugurated for the protection of the profession and for the advancement of knowledge. At this time the non-identity of eruptive fevers was accepted as a fact. In 1846 Meredith Clymer was the first to discover and describe relapsing fever. Dickson and Drake announced their belief in the conjoined action of different morbid influences at the same time in the same person. John Ware inaugurated the numerical method in the use of opium. The large use of opium

in peritonitis was referred to as the American method of treatment of this disease. Bowditch invented the operation of paracentesis thoracis, and although we now say aspiration in place of suction, the operation in its origin is American.

Coming down to the last quarter of the century, the speaker alluded to some of the characteristics of progress in medical science in America, the advance in histology and pathology, the use of the microscope (referring here to the brilliant paper on the microscope by Burnett in 1851), the great influence of German medical literature in the direction of pathology, the fondness of Americans for foreign schools, and the unwise prejudice of some persons against this inclination to study in European schools. We should be humble in our relations with the schools of Europe; yet no student from abroad, who has remained the mere satellite of his foreign master, has ever attained distinction.

Reference was then made to the injustice of the non-existence of a copyright law. Republication of French works in translation has become unnecessary because of the general knowledge of the original. Similar knowledge of the German language, it is hoped, will soon be as general.

Our literature has been fairly treated and well received abroad. Our works are practical in character because we are young. The leading characteristic of our medical schools is practicality. The public is practically unprotected by law against practitioners who have no diplomas. Let us try to improve our methods of teaching, but avoid wholesale condemnation of what has been done. Of our code of ethics, Dr. F. said, it has remained unaltered during the past twenty-five years. This reflects honor on the profession. In no other country is the dividing line between illegitimate and legitimate practitioners more sharply drawn than in ours, because in no other country do medical men occupy so high a social grade.

After Dr. Gross had taken the chair, and returned thanks for the honor conferred upon him, the meeting adjourned until 10 A. M., to-morrow.

Second Day.—Drs. T. G. Richardson, of New Orleans, and N. S. Davis, of Chicago, moved that all the reports from the several sections be ordered to be published ; and that the Congress shall not be held responsible for the conclusions. It would be impossible for the Congress to get through with discussions for several months, if a contrary course was taken. The members of the several sections have given the subjects committed to them great attention, and they have been freely and fully discussed. It should therefore go out that the deductions are those of the sections—carried.

The Secretary read letters of congratulations from the Imperial Medical Society, of St. Petersburg, and from the Norwegian Medical Society.

Resolutions were adopted expressive of great interest in the institution of the National Medical Library, at Washington, and calling upon the members of the Congress who are citizens of the United States, to exert their influence to secure the enlargement of the Library and the speedy publication of the catalogue.

“Address on Hygiene and Preventive Medicine,” by Dr. H. I. Bowditch. The gentleman, on making his appearance, was greeted with applause. He said that public hygiene had been woefully neglected ; but of late a new and better era has been dawning. In regard to medical social ideas, the past century divides itself into three unequal epochs. The era of theory and dogmatism extended from 1776 to 1832 ; of careful observation from 1832 to 1869—this epoch being often marked by bold and sometimes reckless skepticism ; the third epoch, from 1869 to 1876, is distinguished by State preventive medicine, and is destined to progress while the nation lives. He then referred to

the illustrious Boerhaave and his doctrines; after him came Hoffman, Cullen, Brown and Darwin, each with his own system. In 1790, our own Benjamin Rush proclaimed that the proximate cause of all fevers is the convulsive motion of the arteries. Rush had more influence than any other man upon the medical opinion of the first epoch; but his theories fell under the influence of Broussais' theories. The medical profession owes to the laity the first great effort in behalf of State preventive medicine, especially to Lemuel Shattuck, of Boston, and Edwin Chadwick, of England. Much has been done, but a great deal remains to be accomplished in the promotion of public hygiene. The speaker favored the establishment of State sanitary boards, and recommended the sanitary laws of Massachusetts to those States which have as yet taken no steps in the matter. Among other matters noticed, and which Dr. B. considered of great importance, is the adulteration of food. He also recommended the establishment of an international code of health, which, though such a step may be far in the future, will inevitably come. There should be a national law for enforcement of vaccination, and every foreign nation should adopt it. Allusion was made to the construction of tenement houses, which was a matter of great concern. Sickness is engendered by reason of the packing of persons together with no regard to cleanliness. To remedy the trouble arising from tenement houses, the authorities will have to make stringent laws relating to their sanitary condition, and enforce them. A number of other matters were alluded to, such as sewage, irrigation of lands, and the necessity for steps to be taken by which drinking water may be kept pure. The following States have State Boards of Health: Alabama, California, Dist. of Columbia, Colorado, Georgia, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Virginia, and Wisconsin. Dr. B. maintained that our present duty is organization. There are annually

about 200,000 deaths from preventable diseases in the United States.

At the conclusion of the address, Dr. Theodore G. Wormley, Professor of Chemistry in Starling Medical College, Columbus, Ohio, addressed the Congress on "Medical Chemistry and Toxicology." He reviewed the progress made in chemistry, and the developments that have been made through that science. A high and deserving compliment was paid to Dr. Benjamin Rush, the great professor of chemistry in this country, and also the first (1769) to fill the chair of chemistry in an American college—the University of Pennsylvania. A tribute of respect was also paid to the memory of Prof. Robert Hare, who was professor of chemistry in the same institution, and became distinguished in both countries by reason of his invention of the compressed blow-pipe. After tracing the introduction of the science into the various institutions, the speaker referred to chemistry as applied to medicine, and remarked that it was a broad domain upon which to enter. A considerable portion of the address was devoted to the consideration of poisons and their antidotes. It was incidentally stated that in the early part of the century, less than one grain of arsenic could not be detected. The discovery and the tests were alluded at length. As an historical effort, the address was one of great ability, and invaluable to the medical profession. Adjourned until 10 A. M. to-morrow.

Third Day.—A communication from the National Temperance Society was read, inviting a declaration to the effect that alcohol should be classed with powerful drugs; that it is in no sense food to the human system; and that total abstinence from alcoholic beverages be recommended to the several nationalities represented. The communication was tabled.

The Section on Medicine recommended through Dr. E. C. Sequin, of New York, the following, which were adopted:

Resolved, That the International Medical Congress of 1876, recognizes the advantages which would accrue from the introduction of a gradual uniformity in the multiple and heterogeneous elements of physic, as posology, nomenclatures, &c., and in the means and records of medical observation.

Resolved, That in consequence, this Congress authorizes the President to appoint three delegates to the International Congress of 1877, with the special mission of presenting a schedule of the means of uniformity in physic actually applicable in all countries, and another of those which could soon be made acceptable by the profession at large.

Resolved, That the said delegates be advised to invite the co-operation of the men who have already worked for the same cause at the International or National Medical or Pharmaceutical Congress of Paris, Vienna, St. Petersburg, Brussels and Buffalo.

Prof. Rudnew, of Russia, was called to the chair.

Dr. Paul F. Eve, Professor of Operative and Clinical Surgery, University of Nashville, read a paper on "Surgery." He said, while this may be the Centennial of National Independence, it is not that of the profession. It was as late as 1820 that the taunt was uttered, "What does the world yet owe to an American physician or surgeon?" He who may be regarded as the father of American surgery, Philip Sidney Physick, was only eight years old at the time of the Revolution. He was among the first to apply animal ligatures, employing buckskin for that purpose. A striking proof of Dr. Physick's appreciation in Europe, was that his work became the text-book in the University of Edinburgh. Of him it has been said that he never spilt a drop of blood uselessly. Intimately connected with the rise and progress of surgery in America were four others, viz: Warren, of Boston, Mott, Dudley and Gibson. Valentine Mott was a native of Rhode Island. Dr. Dudley was a native of the West, and spent several years in Europe. He gave but little medicine, but insisted upon the observance of hygiene. He was for years the surgical patriarch of the West. He performed lithotomy 225 times, and lost but six patients. William Gibson was born in Baltimore in 1784. It was he who extracted the ball from

General Scott at Lundy's Lane. Dr. Gibson was probably the best lecturer we have ever had in America. His memory was so retentive that he was known to repeat 300 lines of Virgil. He performed the Cæsarean section twice on the same patient, saving mother and child. American surgeons present a creditable report on the subject of amputation. The official reports of the late war show that the mortality in the medical staff was greater than that of any other. Not less than fourteen foreign journals noticed our army medical reports. In the Prussian service our ambulance system was adopted. It has been reserved for American surgery to teach the world how to relieve or prevent human suffering. Fifty years ago not a half dozen Americans were known abroad as surgeons; but in 1859, Dr. Reese, in preparing an American edition of Cooper's *Surgical Dictionary*, introduced no less than 109 American contributors.

Among other things of interest in this address, Dr. Eve said that Dr. A. W. Smythe, of New Orleans, in 1864, tied the carotid and vertebral arteries, and the patient lived ten years, dying of a second operation on the mammary artery. The ligation of the vertebral artery has been done by several. Dr. Cogwell, of Hartford, in 1803, first tied the common carotid. Until Dr. Gross published this fact, Sir Astley Cooper had all the credit of it. Dr. Wm. T. Briggs, of Nashville, was the first to apply two ligatures to the internal carotid. Prof. Post, in 1817, first successfully tied the subclavian, others abroad having failed. Dr. W. Stone first applied metallic ligatures to a wounded artery. Dr. S. W. Gross has shown the apparent innocuousness of applying ligatures to veins. The practice of ligation of vessels for the relief of gangrene is of American introduction. Arterial compression was long known in this country. The employment of the Hunterian method of ligation as a means of prevention, or for the relief of destructive inflammation, was proposed in the United States. Dr. Carnochan first ligat-

ed the femoral for elephantiasis, and afterwards, in the same case, the external iliac, successfully. Dr. Jonathan Knight was the first to treat popliteal aneurism successfully by digital compression. Dr. Daniels, of Georgia, first introduced extension by weights and pulleys in fractures; but Dr. Eve believes that the os femoris, when fractured at certain points, cannot be extended to its full normal length, and so maintained, without impairing its nutrition.

Manipulations for reduction of fractures by Dr. William R. Reed is called by Mr. Spencer the American or circumduction method. The discovery of the anæsthetic effect of ether in its relation to surgery was referred to, and also the important diagnostic sign described by Dr. L. A. Dugas, of Georgia, by which absolute distinction was readily made between fracture and dislocation at the shoulder. Dr. J. Rhea Barton, according to Erichsen, performed the first resection for bony ankylosis. Dr. Mussey, in 1837, performed excision of the whole scapula. Barton, Brainard and Buck were the first satisfactorily to relieve osseous deformities. Various other cases of resection of special bones were referred to.

Dr. Mott founded the first orthopædic hospital in this country. Dr. Sayre has done more work in this department than any other person. Primary amputation at the hip-joint for wounds was first successful in 1806. Three or four successful cases are reported in the late war; previously in foreign wars all had failed. If not for the record of these successful cases, says von Langenbeck, the Prussian Surgeon General, it is doubtful if the operation would not have been prohibited. The use of silver wire by Sims in uterine surgery was also referred to. Numerous other operations shed lustre on American surgery.

Dr. J. M. Toner, of Washington, D. C., addressed the Congress on "Medical Biography." He appeared to discharge the duty assigned of preparing a biographical retrospect of the medical

profession of the United States during the Centennial period just passed. In glancing over the period, he was struck by the paucity of really striking events which influenced the practice of medicine, and that have left special marks at the end of the first century of our national existence. Wars have generally been promotive of medical science, and our profession was no doubt much benefited by the contest for independence. For the first quarter of a century after this armed struggle, the leading physicians and surgeons were those who had served in the army. The most notable event of this period was the occurrence of an epidemic yellow fever, which appeared in the summers of 1793 and 1798, in nearly all our Atlantic cities. This disease tested the courage and taxed the energies and best skill of the profession, and prompted the more eminent to reduce their observations to writing, and to have them published either for the defense of their practice or for the laudable purpose of making contributions to medical science. The second quarter of the Centennial period was distinguished by the introduction of vaccination, the occurrence of spotted fever, and the war of 1812. All of these were events which stimulated the profession to more extended studies, and became incentives to authorship. This was especially true of the disease known as spotted fever. The war of 1812 proved to be another great school of experience, although it was not fruitful in medical reports and publications. The aspiration which it aroused, however, in the profession, gave an impetus to the establishment of medical periodicals, and the founding of medical colleges and hospitals. In following out the plan of dividing the century into quarters, the third may be marked as noted for the discovery of anæsthesia, the epidemic of Asiatic cholera of 1832 and 1848, and the war with Mexico, as well as the discovery and the application of many new and improved methods of physical exploration in the search for disease. The last quarter, which

has just closed, is specially distinguished by the vast experience of the late war, which was a great school, and which has benefited the medical profession of the whole country. Sixty-five thousand American physicians died during the century.

After some further remarks complimentary of leading physicians during the last century, the Congress adjourned.

Fourth Day.—The President announced the appointment of Drs. H. I. Bowditch, J. J. Woodward, and E. C. Sequin, as the delegates to the Convention in Geneva, in 1877, as ordered in a resolution adopted yesterday.

Dr. Bowditch presented resolutions, which were adopted, asking for the appointment of a committee who should be instructed to memorialize the Congress of the United States, urging efficient support for the prosecution of the work of establishing the National Medical Library and Anatomical Museum.

Drs. Bowditch, Rudnew, and N. S. Davis were appointed as such committee.

Dr. H. Miyado, of Tokio, Japan, occupied the chair during the reading of a paper on "Obstetrics," by Theophilus Parvin, M.D., Professor of Obstetrics in the College of Physicians and Surgeons of Indiana. He said, the germ of American obstetrics was British, rather than French. Seventy or eighty years ago, the practice of obstetrics was almost exclusively in the hands of women. The name of Williams Potts Dewees should live forever. He has by his works reared a monument more enduring than quarried granite or molten brass. Of the late Dr. Hugh L. Hodge he said, few men have studied the mechanism of labor more thoroughly — none have expounded it more clearly. Generations may come and depart until another century pours its treasures upon the race; but it is doubtful if among these will be found another work on Obstetrics of greater relative merit, and of more enduring value, than the work of

Dr. Hodge. The present century has been marked by some of the most important advances in obstetrics. Anæsthesia must be considered as one of the greatest glories of obstetrics. The administration of chloral for relief of pain has also had many advocates in this country. An advance has been made in the more liberal diet and hygiene of women. The speaker referred, among other things, as signs of progress, to the establishment of Women's Hospitals.

After a brief recess, Prof. S. C. Chaille, of Louisiana, delivered the address on "Medical Jurisprudence," reviewing the subject critically for the past two centuries.

Fifth Day.—Dr. P. F. Eve, Nashville, offered a resolution prohibiting the publication in medical journals, either entire or in abstract, the papers read before the Congress, until they have appeared in the printed minutes. Adopted.

Dr. N. S. Davis, of Chicago, offered the following resolutions, which were adopted:

Resolved, That the Committee on Publication be authorized and instructed, as soon as practicable after the final adjournment of the Congress, to ascertain the probable cost of publishing the full transactions in a style appropriate for the work; and if the money on hand is found deficient, they shall address a circular letter to each American member of the Congress asking for such additional sum, not exceeding \$10 for each of such members, as will supply the deficiency; and that said committee be authorized to withhold the volume or volumes, when published, from any member who may neglect or refuse to pay the additional sum required.

Resolved, That the Committee on Publication be authorized and requested to exercise a careful and liberal discretion in preparing and revising the proceedings and reported discussions in the several sections for publication in the transactions of this Congress.

A communication from the Women's National Temperance Union was received, calling the attention of the Convention to the subject of intemperance, this, with a letter from the American Temperance Association, was referred to the Medical Section.

Dr. John P. Gray, Superintendent and Physician of the New York State Lunatic Asylum, Utica, New York, read a paper on "Mental Hygiene." The Doctor, after dwelling upon the subject from individual, national, and social points of view, spoke of political economy and sociology in reference to their near relation to it, and declared that the subject covered the broad field of human energy. Only lately has mental hygiene been particularly demanded in the progress of science as a separate study. In a national point of view, no nation is substantial unless it has religion for its foundation stone. The lesson of mental hygiene for nations, which we learn from all example is, not that education and wealth, nor the refining influence of æsthetic art, will suffice for the highest development of national mind; but that if underneath and through all these are not interwoven the great truths of moral responsibility to the author and upholder of all governments, lifting man above the dominion of the baser passions, the nation dies as an individual dies, for "Unless the Lord build the house, they labor in vain who build it." And may we not say that the influence of this illustrious example (referring to a poem by George Herbert) had some share in determining the tone and the practice in that respect of this renowned University from the foundation, whose successive provosts have been eminent illustrations of the essential harmony between the different qualities of faith and science? This thought has come to his mind since entering this hall and reading the inscription.

An address on *Medical Literature* was next read by Lunsford P. Yandell, M. D., late Professor of Physiology, in the University of Louisville, occupying nearly an hour. This address contains a complete list of American medical works in the order of their publication. The first American medical journal was begun in 1797; the number since projected is about one hundred, of which over fifty have been withdrawn.

An invitation was extended to the members to inspect the Medical Department of the University, the University, and the Pennsylvania Hospital to-day.

Sixth Day.—Dr. Sayre, New York, offered the following, seconded by Mr. Carter, of London, in a beautiful speech, which was unanimously adopted by the Congress:

Resolved, That this International Congress request our President, Prof. Gross, to sit for his portrait, and that the Committee on Publication be instructed to have same engraved and printed as the frontispiece to the volume of our Transactions.

(It is understood that, for the sake of exactness, this shall be a photographic likeness, unless otherwise ordered by the Committee.)

Dr. White offered a number of resolutions of thanks, which were unanimously adopted.

Dr. Bowditch offered the following, which was adopted:

Resolved, That we, a brotherhood of physicians from the North, South, East and West of this country, hereby tender to our associates from other lands, our most earnest wishes that they may have safe and happy returns to their homes; and we would suggest the hope that they will carry back many pleasant memories of this fraternal meeting now closing, and which has been most appropriately held in this generous and noble city of Philadelphia.

Prof. Charles J. Hare, of England, followed with a letter of congratulation from the delegates of Great Britain. Dr. J. A. Grant, of Canada, also offered some friendly resolutions on the part of Canadians present.

The Secretary-General stated that he had received a circular announcing that an International Medical Congress would be held in Geneva in September, 1877.

The Secretary announced that the register contained the names of 480 delegates.

An address on “Medical Education and Medical Institutions,” was read by Dr. N. S. Davis, Professor of Principles and

Practice of Medicine, Chicago Medical College. In 1752, the only general hospital in the country was founded in Philadelphia. There were soon after 3,000 practitioners in thirteen States, only two medical colleges, and two organized medical societies. He referred to the early establishment of schools in Philadelphia, the degrees then conferred, with sketches of the relations existing between the schools of that city in the latter part of the century, with the regulations of each for study and graduation. Columbia College, New York, was the first to confer degrees of Doctor of Medicine. A detailed account accompanied the report, enumerating all the medical colleges founded since the beginning of the century, with their dates of institution. From the close of the Revolutionary war to the present time, 77 colleges have been founded, not counting a few very transient and ephemeral ones. Sixty-one are now in active operation. In 1875-6, there were in all the States 6,650 students, of whom more than 2,200 received the degree that season, not including those in pharmacy or dentistry, or those conferring degrees founded on exclusive dogmas. Generally, medical education is not dependent on legislative aid.

After a few well-expressed remarks as to the inestimable value of the Congress, and of good wishes for all the members now about to separate, the President announced the labors of the Congress completed. The body then adjourned *sine die*.

· SYNOPSIS OF PRINCIPAL PAPERS READ BEFORE SECTIONS.

“The Influence of High Altitudes on the Progress of Phthisis.” —The Reporter, Dr. Charles Dennison, of Denver, Colorado, first referred to the past history of the climatic treatment of phthisis. The climates of high altitudes were considered by their important attributes, which were contrasted with the same qualities in less elevated health resorts; in America the elevated inland plains and “backbone” of the continent, between

elevations of four and ten thousand feet, being matched with sea-side and inland resorts below the elevation of two thousand feet.

Too much importance has been placed upon *equable temperature*, equability often entailing excessive moisture and other conditions comparatively unfavorable to the majority of consumptives. Cool, dry climates are better than warm, moist ones. It is unjust in the advocates of low climates not to consider the *relative humidity*. Is the comparison of high and low altitudes by the relative humidity of each, temperature being accounted for, fair? As to the *diathermacy of the air*, the conditions for the greatest benefit from the direct influence of the sun grow more favorable with increasing elevation. He then considered the influence of *electric tension, ozone, etc.*, their increase in high altitudes, peculiar effects, and great utility. In analyzing the subject of altitude, he remarked upon the conditions of respiration. Influence of lessened atmospheric pressure upon the circulation and animal economy was also considered. He next discussed the question, to what extent does phthisis originate above the elevation of 5,000 feet? Instances were analyzed, and the favorable conditions for preventing phthisis and lengthening the years of the naturally short lived were pointed out.

In the *treatment of phthists*, the utility of high altitudes rests upon the *adaptability* of climate to the needs of special forms and complications of the disease, as shown by comparison of experience elsewhere. Injurious effects of great elevations, precautions, etc., were dwelt upon. He then spoke of the relation of typical cases, with analysis; inferences and conclusions. He also advised when and how to go to the Rocky Mountain slope; kind of life to lead; advantages in winter and summer compared. A partial recovery necessitates a permanent residence. The remedy of high altitude is too long delayed in the majority of instances.

Dr. Henry MacCormac, of Belfast, Ireland, through the Secretary, presented a paper on "The Open-Air Treatment of Consumption." The paper contended that all tubercular deposits, no matter where situated, are ascribable to habitual respiration of air already breathed, proof being given to the writer's satisfaction, from observation and chemical analysis. He said that tubercle is only the effete waste of the animal organism; when effete tissue is not oxidized it is not expelled as carbonic acid. No other theory, no other treatment than open air, was, in his view, tenable. Drs. Edge, Maddin, of Tennessee, and Davis, of Chicago, took part in the discussion of the paper.

The Section recommended the publication of the paper, but without an expression of opinion on the question involved.

A paper on "The Treatment of Simple Ulcer of the Stomach," by Dr. H. Lebert, formerly Professor of Clinical Medicine at Zurich and at Breslau, was read by its translator, Dr. Chas. W. Dulles, of Philadelphia.

Dr. Scott, of Ohio, said that he had long been in the habit of following in the main the line of treatment marked out by Prof. Lebert in this paper. His plan consisted chiefly of giving the stomach rest by means of nutritious enemata, with opium or morphia; later, a bland and most carefully regulated diet. In feeding by the rectum, too much must not be required of the bowel at the start; the injections should be small at first. One case under his observation had subsisted thirty-one days without the introduction of food into the stomach. When enemata were found to be insufficient, he recommended the subcutaneous injection of concentrated nutriment, such, for example, as Valentine's meat juice, of which one or two fluid drachms might be introduced and left to be absorbed. He had not seen ulceration follow this procedure.

Dr. R. P. Howard, of Montreal, read a paper on "Progres-

sive Pernicious Anæmia," of which the following are the conclusions:

1st. The various forms of anæmia may occasionally take on progressive and pernicious characters. 2d. Such is frequently the case with anæmia of pregnancy and parturition; the converse is true of sclerosis. 5d. A distinct variety of anæmia, having etiology and pathogeny peculiar to itself, "progressive pernicious," is not proven. 4th. Neither spleen nor lymphatic glands usually present any, much less any special lesion in pernicious anæmia. 5th. It remains to be proved that hyperplasia or other change of the bone marrow is a cause of anæmia. 6th. If it be a cause, it has yet to be shown whether it is the cause of a variety that should be especially styled pernicious and progressive, the weight of evidence appearing to be opposed to it. 7th. It is premature to regard pernicious anæmia as a myelogenous pseudo-leukæmia. 8th. Pernicious anæmia is perhaps rather more frequent in females than in males, but the difference is not very great.

Dr. Davis, of Chicago, was disposed to hold in entire abeyance the view that there is a special disease called "progressive pernicious anæmia." In one case, in which no *post mortem* was obtained, the blood, on examination, showed a very few red blood corpuscles, with an abundance of white ones. But there may be a class of affections in which the blood is materially changed. The office of the red cells is not perfectly understood, and therefore we cannot appreciate the disease.

On motion, the paper was referred for publication.

Dr. E. M. Hunt, of New Jersey, presented a paper on "Alcohol in its Therapeutic Relations as a Food and Medicine." The conclusions were:

1. Alcohol is not shown to be a definite food by any of the usual methods of chemical analysis or physiological investigation.

2. Its use as a medicine is chiefly that of a cardiac stimulant, and often admits of substitution.

As a medicine it is not well fitted for self-prescription by the laity, and the medical profession is not accountable for such administration, or for the enormous evils arising therefrom.

4. The purity of alcoholic liquors is in general not as well assured as that of articles sold for medicine should be. The various mixtures, when used as medicines, should have definite and known composition, and should not be incharged promiscuously.

The paper was referred for publication,

“The Excretory Function of the Liver,”—The conclusions of the reporter, Dr. Austin Flint, jr., Professor of Physiology in Bellevue Hospital Medical College, were as follows :

Cholesterin exists in health in the bile, the blood, and nervous matter; also in the crystalline lens, in the spleen and in meconium. It is found for the most part in nervous matter, from which it is passed into the blood. The blood gains cholesterin in its passage through the brain. In old cases of hemiplegia, there is no cholesterin in blood taken from the paralyzed side. Its formation is constant, and it is always found in the blood. It is separated from the blood by the liver and is discharged with the bile. It pre-exists in the blood, serves there no useful purpose and if it is allowed to accumulate, blood poisoning results.

The bile has two separate and distinct functions, to which the so-called biliary salts, glycocholate and taurocholate of soda, contribute; these do not exist preformed in the blood, but are the products of secretion. The second function of the bile is excretion with depuration, this being accompanied by removal of cholesterin, which it obtains from the blood. Normal faeces do not contain cholesterin. The latter is represented by stercoreine, formerly called seroline, into which it becomes converted in its passage down the intestine. The conversion of cholesterin into

stercorine does not, however, take place when digestion is arrested or when it is not necessary, as is shown by the presence of cholesterin in its own form in the fæces during fasting, and in the meconium. The difference between the two forms of jaundice—one mild, the other severe—is dependent upon obstruction of the bile ducts in the one instance, with reabsorption of biliary coloring matter, while in the other there is retention of cholesterin in the blood, in consequence of destruction of the parenchyma of the liver.

That condition of the blood dependent upon the presence of cholesterin in the blood Dr. F. calls *cholesteræmia*. It is characterized by symptoms referable to the brain, and may or may not be attended with jaundice. Cholesteræmia does not occur in every disorder of the liver, because even when a part of the organ is disordered, there may remain a portion still capable of performing the function of excreting cholesterin. In case of simple jaundice, even where fæces are decolorized, there is an accumulation of cholesterin in the blood. Cholesterin bears the same relations to the liver as urea does to the kidney.

“The Mechanism of Joints.”—Dr. Harrison Allen, Professor Comparative Anatomy University of Pennsylvania, the Reporter, starting with the idea that joints are of dynamic and static values, showed that in most movable joints the ball and socket arrangement predominates. When the ball is supported by the socket, as at the occipito-atloid articulation, *rest* is suggested. But when the ball is suspended from the socket, as at the temporo-maxillary articulation, *motion* is suggested. He illustrated the etiology of fracture and dislocation by reference to this method of study. It was premised that articular surfaces are of three kinds: *axial*, *actinic* and *lateral*. The *axial* or primary surfaces are those situated upon proximal and distal ends of a bone in the line of its longitudinal axis. The *actinic* or secondary (rarely seen) are those placed in a line which is deflected from the long-

itudinal axis. The *lateral* or tertiary are those situated upon the sides of the shaft or body of a bone and serve for articulation with corresponding surfaces of other bones. Thus, the outer femoral condyle is *axial*, since it is placed in the line of the longitudinal axis of the femur. The internal femoral condyle is *actinic*, since its line intersects the long axis of the femur, from which it may be said to be deflected. The *lateral* facets of the metatarsal or tarsal bones serve to illustrate the lateral kind.

Axial surfaces, it is believed, are static; actinic surfaces are dynamic; while lateral surfaces have subordinate degrees of value—some of them being adventitious. The outer femoral condyle is active in extension *i. e.*, static; the inner femoral condyle is active in flexion, *i. e.*, dynamic; but the lateral facets have no independent action. Joints are fixed or locked at extremes of flexion and extension, and are most relaxed at the intervals between these extremes. An application of these premises was made to the etiology of dislocation. It was assumed that when a facet is actively employed it enters into a combination with which the entire limb is in harmony. Hence, in the study of any one facet, its relations to all others of its kind, as well as to the bones, muscles and fasciæ of its limb, become essentials. It was shown, in conclusion that a correct knowledge of the symptomatology and treatment of diseases of the joints is dependent upon a true conception of the complex nature of articular surfaces.

SECTION ON SURGERY.—“Antiseptic Surgery.”—The Reporter, Dr. John T. Hodgen, Professor of Surgical Anatomy and Clinical Surgery in St. Louis Medical College, maintained: (1) Putrefaction may and does occur in the solids and liquids of the body, both with and without the direct contact of germs borne in the air or water. (2) Putrefaction of the solids and liquids of an open wound may, in many cases, be prevented if the contact of ving germs with the surface is not permitted; or by

destroying their vitality after contact with it. (3) It is possible that the living solids and liquids of the body may be so altered that they shall not furnish the condition necessary to putrefaction. (4) Practically, the conditions to be met in preventing putrefaction are so difficult that in many cases it is impossible to comply with them. Yet, even partial success is eminently worthy of our best efforts.

In discussing these propositions, Dr. H. said that, in septicæmia the blood contains elements of putrefaction, which elements are derived from fluids. Absorption, as asserted by Billroth, takes place most readily in the early stages of inflammation, and in recent wounds. Diseased skin and wounded surfaces take up the matter readily; yet the latter do not pass through healthy granulations. This has been proved by experiment. Putrid pus is found in abscesses in many parts of the body. A destructive inflammation may originate in these collections; the surrounding walls of the cavities may melt away, and septicæmia, following a large flow of putrid pus, is probably due to fresh inflammation in the walls of the abscess. Debility, fatigue, and the like, induce these changes.

Animals fed on sulphites are not so liable to septicæmia as animals otherwise fed. Any substance that arrests putrefaction is antiseptic. Cotton as a dressing is not reliable, because we cannot be sure that it is free from bacteria. Heating the wool or diffusing gases through it (Lister's method) may free it from germs. Charcoal, clay, chalk, Peruvian bark, and pulverized madder-root, are all useful, but not absolutely sure. Caustics destroy the living organisms upon which putrefaction depends. Currents of dry air, by desiccating the fluid from wounds, prevent the absorption of putrefying matter. Practice shows the necessity of great care in protecting wounds. We should prevent the entrance of Bacteria by plasters, powders or fluids. If

we can keep septic matters within bounds, we prevent septicæmia. We see this in washing out wounds or inflamed uteri.

The antiseptic ligature cannot be ignored. It becomes absorbed and organized; Lister says that we really surround vessels with living animal tissues. Epithelial cells, as is well known, after removal from their place of origin, can proliferate. Why, then, cannot animal ligatures revive and become organized when around vessels?

Dr. Paul F. Eve uses the tendons of the deer. They become absorbed. The entrance of septic germs may be prevented, but only for a time. Actual prevention requires such exact care as will be seldom seen. The fact that germs have been found under dressings so ingenious as those of Lister, shows how nearly impossible it is to prevent their contact with wounds. Experience teaches that, as Billroth asserts, absorption by granulating surfaces does not take place rapidly enough to cause septicæmia. It takes place *before* granulation begins. Drainage tubes, water baths, and other rapid modes of cleansing wounds, will prevent absorption.

Dr. Hewson, of Philadelphia, related his experience with the earth treatment, with which he has been very successful. He thinks water dressings convey germs. For ten years he has not used ligatures, but acupressure and torsion, and thus one source of putrescence is avoided. Dr. H. removes dressings as infrequently as possible, and covers wounds with blue paper to exclude rays of light. During the past few months he has used salicylic acid, but has not allowed wounds to be washed, nor dressings to be disturbed when not soaked by the discharges. At present, he finds nothing so satisfactory as salicylic acid. He finds, too, that it relieves pain.

Prof. Lister next spoke for three hours. He first referred to the great trouble which attends a perfect use of the antiseptic method; but expressed his honest belief that there did not exist

a medical man who would not be faithful in carrying out any form of treatment which promised to help a patient. He described an operation by which he recently cut out large, wedge-shaped pieces from the two femurs of a cripple, in order to straighten his limbs. To do this without strict antiseptic treatment would make success impossible.

Referring to wounds on the head, he said that to remove dressings after days in which they were left untouched, and to find no pus, but fresh cicatrices, was a new era in surgery. To open the spine, remove carious bone, and restore the patient to health ; or to open an acute abscess, press out the last drop of pus, and see no more form, can only be accomplished by the antiseptic method. Unless we use this method, we cannot safely tie large arteries without deep-seated suppuration. We need have no hesitation in expressing the belief that although we may have good healing without antiseptic treatment, we cannot thus secure the best results. Antiseptic surgery is dealing with surgical cases in such a manner as to prevent putrefaction. "When I read," said he, "Pasteur's original paper, I said to myself, 'Just as easy as we may destroy lice in the head of a child who has pediculi, by poisonous applications which will not injure the scalp, so, I believe, we can use poisons on wounds to destroy bacteria without injuring the soft tissues of the patient.' Putrefaction may be caused by an individual himself because of his feeble condition. In simple fractures, even, we have serious wounds. If we could only see it, we should say, 'Here is dead tissue. It must be poulticed to help its removal.'"

If injury follows the opening of an abscess, it is not due to the admission of matter from without, but to the effect upon the pyogenic membrane, which gives it power to absorb, as it did not when intact. So says Billroth. But we did not need to have Billroth tell us that granulations do not absorb, and that putrescent absorption occurs before granulation. "I said this

years ago. We all know how when water dressings are removed from granulating surfaces, the whole ward will stink, and yet the granulations do not absorb. The cause of the mischief in the free opening of abscesses without the antiseptic treatment is that the pyogenic membrane is not in a condition of granulation. But in acute abscesses we have a granulating surface, just as we have in recent wounds. It is not so in chronic abscesses. Many abscesses do not form pus at all until they are opened. They are not then in a condition of granulation; but in consequence of their chronicity, they can absorb. Granulations covered by epithelium develop in proportion to the amount of epithelium. In pyogenic membranes the surface will absorb in proportion as it resembles a sore with the granulations stripped off. I have seen a patient die within twenty-four hours (before the membrane had had time to granulate) by absorption of putrescent matter; and although the discharge was clear, and not yet pus, it stunk."

Prof. L. then showed his common and most reliable dressing. He uses carbolic acid, perfectly pure. That which makes carbolic acid unpleasant to the smell is cresylic acid. "If a solution of water and acid be not clear, the cloud is caused by insoluble carbolic acid, and this portion will irritate the hands if rubbed upon them; but a perfectly pure solution will not do this. Carbolic acid has the property of penetrating through many, even oily substances, and will cleanse more perfectly than anything else." He likes salicylic acid, but prefers carbolic acid because more volatile, and hence more searching. He then showed his ingenious spray producer, which is so arranged that the spray can be directed at any angle upon a wound without the need of an assistant. He begins his dressing by first requesting his patient to cleanse the injured part by washing. He used to excise the carpus. Now he does not like the operation. In case of injury in which there is great mobility of the wrist, he makes

two or more free incisions into the joint, keeps the wound open, and uses a drainage tube, with good results. The finger-nails should always be cleaned before the hand or finger is introduced into the body. Be sure not to introduce anything into the wound not cleansed by the carbolic acid lotion of one part of acid to twenty of water.

Mr. L. uses a coarse netting dressed with a mixture of carbolic acid, one part to five parts resin. He first lays upon the wound a piece of oil silk well varnished with copal varnish, and wet in the carbolic acid lotion. He does not use this in opening abscesses, because he does not wish them to heal. If the gauze went first upon the wound it would irritate and cause a flow of pus, but if the oil silk be first laid on, we may leave the dressing for a week. If, during an operation, an instrument be laid on the table, it should not be again used until it has been dipped into the carbolic acid lotion. The gauze is next laid on, first being dipped into the carbolic acid lotion. The remainder of the dressing, already prepared of layers of calico, oil silk and wadding, must not be laid on without first protecting it by gauze dipped into the lotion, because, having been lying upon the table, it may be covered with germs. All this is done under the spray; and when the dressing is changed it must be done under the spray, and one must see that this plays between the dressing and the skin of the patient. The whole is bound on by a roller of silk gauze moistened in the solution.

Mr. L. then explained his own experiments and those of others with milk, water, urine and other fluids, variously protected from bacteria by covers, or by boiling. He showed how germs may find entrance into fluids, and how these fluids may be protected from them. In regard to bacteria found in freshly voided urine, he believed that a healthy mucous membrane in the urethra prevents the development of bacteria. In lesions of the membrane, if it be washed by a solution of water and carbolic

acid; and the penis be washed in the solution and a cap soaked in the solution be put on, the urine will not change in any respect. He then described his catgut ligature, and his method of preparing it. He at first tried chromic acid, but that substance made the ligature too hard. He then tried glycerin, chromic acid and water; next chromic acid and carbolic acid; now he uses chromic acid, glycerin, water and spirits of wine.

Prof. Gross then said that for years he has prevented irritative fever in patients who had chronic abscesses, without the antiseptic method, by putting them at once under the influence of anodynes, and keeping them thus for several days.

In reply to a question as to the use of the antiseptic treatment in abdominal lesions, Mr. L. mentioned a case in which the bowel protruded and lay outside the cavity for half an hour, covered with a cloth dipped in the carbolic acid solution. The bowel was returned, and there was not the slightest disturbance of the peritoneum. He himself never did ovariotomy, because there was an ovariotomist in his hospital; but all of his six colleagues, with one exception, employed the antiseptic treatment as carefully as he himself, and their success is in proportion to the amount of care they use.

He explained away the report that bacteria had been seen under his dressings. The report was started by Ranke, Volkmann's assistant in Halle, who thought he had discovered bacteria; but when Ranke came to Edinburgh, Mr. L. showed him that the supposed bacteria were only a microscopical illusion, caused by movement of the fluid in the field of the microscope, which movement was communicated to particles of inanimate matter which resembled bacteria. Ranke confessed his error.

After the discussion, the Section voted that it was unable, in the present state of the subject, to come to any distinct conclusion in regard to the antiseptic method.

“Treatment of Coxalgia.”—The Reporter, Dr. Lewis A. Sayre,

Professor of Orthopædic and of Clinical Surgery in Bellevue Hospital Medical College, after describing coxalgia, divided the disease into three stages. After giving the diagnostic symptoms, and the pathological changes in the joint of each of these stages, he remarked in reference to the etiology of the disease, that it may occur in *any* person from a sufficient exciting cause. The disease is almost peculiar to childhood, because this is the age of reckless indifference. It is not of necessity of scrofulous origin. It is almost always of traumatic origin, and not necessarily connected with vitiated constitution.

Proper treatment, in the majority of cases, will result in recovery with good or perfect motion, and without deformity. *Rest* and freedom from pressure of *the parts* involved, while at the same time the rest of the body is allowed free exercise in the open air, and a nutritious diet, is the best treatment that has yet been devised for this disease. If this plan of treatment is adopted in the early stages of the disease, the majority of cases will recover with nearly, if not quite, perfect motion, and without deformity. In the advanced *second* stage, when absorption cannot be produced, it is better to puncture or aspirate the joint and remove its contents than to leave it to rupture by ulceration.

In the third stage, when the treatment recommended has been properly applied without satisfactory improvement, but progressive caries continues, then *exsection* of the diseased bone is not only justifiable, but absolutely necessary. The operation of *exsection* of the hip is easily performed, and attended with no danger. After *exsection* of the hip joint in cases of caries, the recovery is much more rapid and certain, and infinitely more perfect as to form, motion and usefulness of the joint and limb, than when left to the slow process of nature's exfoliation.

Dr. Gross opened the discussion. He could not agree with the second conclusion of Dr. Sayre's paper (that coxalgia is

almost always traumatic in origin, and is not necessarily connected with a strumous constitution). He always asks, "Has this child received a blow, a fall, a contusion?" The general answer is *No*. We are safe in saying that inquiry in the majority of cases would thus result. Doubtless coxalgia is sometimes the result of injury, but not necessarily so. Coxalgia *cannot* occur in a child not laboring under constitutional degradation. It is as impossible as the occurrence of consumption without a forerunning debility. In cases of abscess, what is the character of the pus which follows the knife? Manifestly it is strumous, like the sputa of phthisis. Turning to Dr. Sayre, Dr. Gross asked, "Have you ever seen any other kind of pus issuing from a diseased hip-joint?" "No," replied Dr. Sayre. "That settles this point, then, and shows the constitutional condition of the patient. It occurs at the hip joint, because that is the weakest part of the child, or it arises because of suppression of cutaneous perspiration. It may be hereditary. One or more members of the patient's family will be found to be consumptive, to have had caries of the spine or of other bones or a syphilitic taint. I maintain that the part is in a predisposing condition. Unless this predisposition exists, I believe coxalgia not liable to arise."

Mr. William Adams, President of the Medical Society of London, read a paper on "Subcutaneous Division of the Neck of the Femur. He had collected all the published cases—23 in number (five by himself). From the good results attained, he should be prompted to do it in well-selected cases when the deformity is inconvenient, as there has been but one death, and that in an unfavorable case. He showed the necessity of careful watching during the treatment of all hip diseases or injuries. The straight position in one case prevented the patient sitting on a chair, and also debarred her from emptying the rectum save by standing. The operation is very simple, the soft tissues being pierced down to the bone, the periosteum divided or

scraped away, and the saw carried down along the blade of the knife, it being carefully noted that in sawing the cut should be made at right angles with the longitudinal axis of the neck. The saw is blunt-pointed, very robust in the handle, and with cutting edge just as long as the diameter of the bone, that no damage be done to surrounding tissue. About two or three minutes usually severs the bone. When the head and neck have disappeared, the section may be made through the trochanter minor. Extension is applied by weight and pulley, and passive motion instituted at the end of first week. His conclusions were: 1. That bones can be divided subcutaneously, the same as tendons. The operation is a well-established one, and the cases almost uniformly do well. 2. Long bones can be divided subcutaneously at any point with little risk. 3. In a large number of cases the operation is followed by but little irritation, and there is seldom pain or suppuration. 4. In some there is slight suppuration, but not serious, and in one case there was death from pyæmia. 5. The operation usually corrects the deformity, though ankylosis in the more favorable position may occur. In some cases motion has remained for a time, and in one case as long as three years.

“Medical and Surgical Treatment of Aneurism:”—The Reporter, Dr. Wm. H. Van Buren, Professor Principles and Practice of Surgery and of Clinical Surgery in Bellevue Hospital Medical College, after glancing at the causes of aneurism and the sources of information at his command, rapidly enumerated the several modes of treatment at present in use, and endeavored to estimate the remedial value and especial applicability of each. Incidentally, the following mooted questions were touched upon: (a) Why blood coagulates so much more promptly in some cases of aneurism than in others where conditions are apparently alike; (b) the value of antiseptic treatment in securing quick union of the wound after applying a carbolized catgut ligature

for the cure of aneurism after the Hunterian method; (c) the propriety of employing the carbolized catgut ligature upon a large artery; (d) the value of the "constricting" ligature of silver wire; (e) the comparative value of rapid and slow pressure; and (f) the value of galvano puncture—of coagulating injections, etc.

In the discussion which followed, Prof. Joliffe Tufnell especially recommended rest in the treatment of aneurism. He illustrated his remarks by means of photographs and prepared specimens.

Prof. Lister remarked that the question was not so much as to whether an aneurism was idiopathic or traumatic, as to the amount of danger involved in surgical interference. If an aneurism were traumatic, we at once cut down upon and ligate the artery, knowing that no matter where we ligate the vessel will be healthy. On the contrary, in idiopathic aneurisms, we may have an artery which will not bear a ligature until we have dissected far up or down its continuity. In these cases it is almost as well to do the old operation at once. He thought the old tourniquet much safer than is commonly supposed. When it produces ill effects, it has not been rightly adjusted. Syme had only one death in forty cases, and this because he used compression. Lister then described his treatment of nævi, by strangulation—the only modification being the use of carbolized catgut ligature.

Dr. John Ashhurst, of Philadelphia, said, in regard to the abdominal compression, Prof. Pancoast had not claimed the credit which belonged to him. He was too busy to publish all he had done. But he invented a compressor which antedated Lister's instrument about two years, although it was acknowledged that Prof. Lister's compressor was more perfect. Dr. Ashhurst felt that as an American he ought to claim thus much credit for a native surgeon.

Prof. Tufnell informed the section that in 1835 LeStrange, of Dublin, left his collection of surgical instruments to two colleges in that city, and that among them was a compressor, invented by LeStrange, proving that there is almost literally nothing new under the sun. But LaStrange's instrument was a simple abdominal compressor used only in treatment of aneurism, whereas Pancoast's compressor was invented and used entirely for the purpose of checking and controlling haemorrhage during operations at the hip-joint; so that a comparison of two similar instruments, which were invented for entirely different uses should not have been made.

The following conclusions were adopted by the Section;

1. Tuffnell's treatment of aneurism by rest, position, and restricted diet offers a valuable resource in thoracic and abdominal aneurisms.
2. It should always be tried in innominate, subclavian, subclavio-axillary, and iliac aneurisms, before resorting to measures attended by risk to life.
3. For aneurisms of the subclavian and iliac arteries, the Hunterian operation, with our present means of preventing secondary haemorrhage, is not justifiable.
4. For reasons formally set forth by Holmes and Henry Lee, the "old operation" cannot properly be substituted for the Hunterian operation in these cases, but should be held in reserve for special cases.
5. It is the most safe and surgical resource in gluteal aneurism, if the circulation can be commanded by the hand *in seco.*
6. The mode of cure by embolism, aimed at in the method of manipulation, is a not infrequent explanation of what is called "spontaneous cure" of aneurism.
7. The value of Esmarch's bandage in the treatment of aneurism is probably not fully estimated.
8. In view of the promising features presented by the cases of

Levis and Bryant, in which horse-hair was introduced into an aneurismal tumor, the repetition of this operation, or the substitution for horse hair of Lister's prepared catgut or other animal substances, may be properly tried.

"Are Eczema and Psoriasis Local Diseases, or are they Manifestations of Constitutional Disorders?"—The Reporter, Dr. Lucien Duncan Bulkley, editor *Archives of Dermatology*, New York, after reviewing the nature of the eruption in constitutional disorders affecting the skin, the nature of local diseases, the microscopic anatomy of the two diseases under consideration, the clinical history of these two and some local diseases, and after discussing the effect of local and of constitutional treatment, adduced the following conclusions, which were adopted by the Section :

1. Eczema and psoriasis are distinct diseases. The former is to be clearly distinguished from artificial dermatitis, and the latter from the eruptions of syphilis, scaly eczema and leprosy.
2. Eczema and psoriasis cannot own a double causation or nature, at one time local and another constitutional ; but, with other diseases, may have a two-fold cause, a predisposing and an exciting.
3. Eczema and psoriasis, in many of their features, resemble the accepted constitutional diseases more than they do those recognized as local.
4. Eczema is most properly likened to catarrh of the mucous membranes ; it is very probable that some attacks called catarrh are eczema and psoriasis of the mucous tissue.
5. Both eczema and psoriasis resemble gout and rheumatism in certain respects, and are dependent upon a somewhat similar, although as yet unknown, constitutional cause ; much of the skin lesion must be looked upon as the local result or remains of the dieases.
6. There as yet exists no microscopical or physical proof that

eczema and psoriasis are the sole result of local cell disorder, either congenital or acquired, or due alone to perverted nerve action.

7. Local causes play a very important part in the etiology of eczema. They are probably inoperative in psoriasis.

8. Local treatment is often insufficient alone to remove the lesions of eczema and psoriasis, and cannot prevent or delay relapses ; its success does not necessarily demonstrate the local nature of these affections.

9. Constitutional treatment, alone and singly, can cure many cases of eczema and psoriasis, and prevent or delay relapses in a certain proportion of cases ; under constitutional treatment is included every agency not properly classed among local measures.

10. The total weight of evidence and argument is that eczema and psoriasis are both manifestations of constitutional disorders, and not local diseases of the skin.

“ The Virus of Venereal Sores ; Its Unity or Duality.”—The Reporter, Dr. Freeman J. Bumstead, late Professor of Venereal Diseases in the College of Physicians and Surgeons, New York, stated that three views as to the origin of venereal sores have been entertained : All venereal sores are due to a single, specific virus, the virus of syphilis. Some venereal sores are due to the syphilitic virus, and others to a distinct virus, known as the *chancreoidal*—others to the inoculation of the products of simple inflammation, in which latter case no specific virus exists. The evidence for and against each of these suppositions, drawn from clinical experience and artificial inoculation, was considered.

The term *virus*, is here understood in the broad sense of contagious poison. Bassereau, in 1852, by the “ confrontation” of patients, established two diseases in the complex affection, syphilis—one local, the other constitutional. He was followed by a school of dualists who claimed for both affections a specific virus

of its own, incapable of generation *de novo*. But the experiments of Henry Lee, Boeck, and others, showed that the secretions of syphilitic lesions could be auto-inoculated with the effect of producing chancroids. The assumption by the dualists of a "mixed chancre," containing two kinds of specific virus, proved insufficient. Henceforth, the existence of a specific virus belonging to the chancroid must be abandoned. The same experiments were also supposed to prove the transformation of the syphilitic into the chancroid poison, which conclusion was too hasty. Together with the secretions of syphilis, the products of simple inflammation had been inoculated; if these alone would produce the same result, then they were the guilty factor. That such is the case is proved by the experiments of Dr. E. Wigglesworth, Jr., of Boston, in 1867-68, not hitherto published, and more recently by Kaposi and others, whereby it is shown that the inoculation of simple pus will produce pustules and ulcers, re-inoculable in-generations, and bearing every characteristic of the chancroid. While adhering, therefore, to the doctrine that the poisons of syphilis and the chancroid are distinct, the Reporter denies that chancroid has a specific virus of its own, and believes it to originate in inoculation of the products of simple inflammation.

The Section, with slight modifications, adopted the Reporter's views as follows:

1. The virus of venereal sores is dual.
2. Venereal sores may be due to the inoculation of the syphilitic virus, and also to the inoculation of products of simple inflammation.
3. These two poisons may be inoculated simultaneously.
4. (Additional). The present state of science has demonstrated that suppurating inflammatory lesions resembling chancroids, may be produced on various portions of the body by inoculation with simple pus from various lesions.

“Treatment of Syphilis with Special Reference to the Constitutional Remedies Appropriate to its Various Stages.”—Dr. E. L. Keyes, Adjunct Professor of Surgery and Professor of Dermatology in Bellevue Hospital Med. College, N. Y., Reporter. The following propositions, slightly modified from those originally presented by the Reporter, were adopted by the Section :

NEGATIVE CONCLUSIONS, VIEWS FOR WHICH THERE WOULD SEEM TO BE NO FOUNDATION IN FACT :

1. Syphilis commencing mildly needs but little treatment, and does not require mercury.
2. Mercury given internally is necessarily debilitating.
3. Mercury is only useful in secondary syphilis.
4. Iodide of potassium is of considerable value in secondary syphilis.
5. Iodide of potassium is of no value unless preceded by the use of mercury.
6. Iodide of potassium acts by liberating mercury which has been lying latent.

POSITIVE CONCLUSIONS, WHICH, IN THE PRESENT STATE OF OUR KNOWLEDGE, MAY BE AFFIRMED.

1. Mercury is an antidote to the syphilitic poison, and of service in controlling all its symptoms in all, even the latest stages of the disease ; its power over gummata being least, and not to be relied upon.
2. Mercury in minute doses is a tonic.
3. Iodine cures certain symptoms of syphilis, but does not prevent relapses.
4. Mercury, long continued uninterruptedly, so far as practicable in small doses from the time of earliest eruption, constitutes the best treatment of syphilis.

“The Causes and Treatment of Non-Puerperal Hæmorrhages of the Womb.”—Reporter, Dr. William H. Byford, Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College, began by saying that non-puerperal hæmorrhage was generally regarded as a symptom, and that pathological causes do not often act singly. The uterus is naturally a hæmorrhagic organ. Attention was called to the researches of En-

gelman and Williams, if one would understand thoroughly the pathological conditions to which the uterus is subject.

The causes of non-puerperal hæmorrhage he divided into centric and excentric or reflex. Under centric causes may be included all those which affect the uterus directly, *e. g.*, tumors of various kinds leading to a hyperæmic condition of uterus, sub-involution, carcinoma, chronic and acute endometritis, as well as those alterations in the shape and position of the organ which induce a venous, or a venous and arterial hyperæmia. Tumors pressing on the *vena cava ascendens* may likewise lead to engorgement of the uterus; also cardiac difficulties, though such are not apt to be serious. Certain constitutional vices—scurvy, leucocytæmia, chlorosis, plethora, etc.—may induce uterine hyperæmia of the uterus. A hæmorrhagic diathesis exists in some cases.

Treatment may be divided into prophylactic, curative, and palliative. Under prophylactic treatment may be included abstinence from all mental excitement, and from certain drinks and food. When hæmorrhage begins, quiet in bed, and rest in the recumbent posture with the hips elevated or in the genu-pectoral position should be insisted upon. Cold applications may be used, and cold and acid drinks taken. Little dependence is to be placed on astringents. For pain in the pelvis, opium or lobelia may be directed, or *gelseminum sempervirens* when there is much vascular or nervous excitement. In cases of local and arterial hyperæmia these will often answer, but may fail in venous engorgement.

More dangerous cases of hæmorrhage must be met by more potent measures, which may be divided into mechanical and chemical. Sims' plan of introducing cotton saturated with a solution of the *liq. fer. subsulph.* and water, one part in two, was highly recommended. One application is often sufficient. The cotton should be introduced into the cavity of the uterus, and

the cervical canal dilated if necessary for that purpose with carbolized sponge-tents, which should never be allowed to remain longer than twenty-four hours (as a rule half that period) without changing. Should this plan fail, resort to the vaginal tampon, the patient first being placed in Sims' position and all clots carefully removed. An ordinary surgeon's roller may substitute cotton or linen if they are not at hand.

Internally he has found hydrarg. bichlorid. with tinct. cinch. comp. of much value. Belladonna is well given in the form of suppositories. If there be a condition of chronic congestion of the uterus and no tenderness, ergot may be used, but care should be taken that a sensitive condition of the organ is not induced. He has not found iodine in such cases of much value.

Where a condition of venous congestion exists, produced by displacement, the first factor in the treatment should be the replacement of the womb and its retention by proper pessaries. In cases of constitutional vice, the general health must be restored.

In the discussion which followed, Dr. Goodell spoke of the inertness of astringents used by the mouth. When used in conjunction with opium, he thinks the benefit only derived from that latter drug. Gallic acid is an exception if prescribed in doses of 20 to 30 grains, repeated every two or three hours until a half ounce is given. He has seen some cases in which ergot seemed to be followed by increased haemorrhage. Occasionally he is utterly unable to discover the cause of the haemorrhage, and then he treats empirically. He applies chemically pure nitric acid to the cavity of the womb with good effect. He thought that the administration of hydrarg. bichlorid. acted as an alterative, and increased the number of red blood-corpuscles.

Prof. Simpson, of Edinburgh, called attention to the value of oxide of zinc given in one or two grain doses *ter die*, but pre-

ferred gallic acid. He had no faith in the value of the tampon *per se*, and thought the perchloride of iron superior to nitric acid as an application. He advised the use of the curette in some cases, after the practice of Sir J. Y. Simpson and Recamier.

Drs. Bordon, Dean, and Sherman, spoke highly of the value of quinia in cases of non-puerperal hæmorrhage occurring in malarious districts, and thought it should never be omitted.

Dr. Parvin, of Indiana, believed the most persistent cases depended on local causes. He thought that hot water applied over the spine in rubber bags was very efficient, and he also laid much stress on the use of quinia. He uses Churchill's tincture of iodine freely.

Dr. Barnes, of London, thought the use of quinia in malarious regions might be very necessary. He always uses it in cases of hæmorrhage from subinvolution, and does not think local treatment alone always sufficient. Lately he has used the witch hazel very much, when the cause of hæmorrhage could not be ascertained. He condemned the use of the curette, and had seen two patients die from its use. The growth of small malignant excrescences was more rapid after using it.

"The Treatment of Fibroid Tumors of the Uterus.—Reporter, Dr. Washington L. Atlee, of Philadelphia.—This consisted in medical and surgical treatment. The principal drugs for which any curative or palliative means were urged were iron, iodine, ergot, and muriate of ammonia. He had used ergot since 1845, and believed it beneficial, first, by its direct action in producing contraction of the muscular tissue; and secondly, by reducing the capillary circulation of the tumor. He had, however, never seen a tumor *entirely* disappear under its influence. Spontaneous cures may result either from the occurrence of fatty degeneration or senile atrophy.

He divided fibroid tumors into two great classes: Those

accompanied by hæmorrhage, and those unaccompanied by hæmorrhage.

Fibroid tumors occurring under class 1, he divided into—
(a) Those found in cervical canal; (b) Those entirely in uterine cavity; (c) Interstitial submucous fibroids; (d) Interstitial fibroids proper; and (e) recurrent fibroids.

The treatment of those occurring under (a) varied according to their size. In many cases they may be twisted off from the pedicle; in others, the pedicle may be divided by the knife; and still others may be more successfully managed by the ecraseur. He long since abandoned the ligatures in these cases, and much prefers immediate ablation. The treatment of those under (b) vary according to the size and location of the tumor. The cervix should be dilated by tents or by rubber bags, or, in obstinate cases and where the operation must be quickly executed, incisions may be made in the cervix. Ergot may then be administered, and, the patient being anæsthetized, the forceps applied, and the tumor, previously separated by means of the bistoury, if necessary, extracted. If adhesions have been formed, they must likewise be separated by the bistoury. Interstitial submucous fibroids (c) may in many cases be first attacked to better advantage by means of ergot than the hazardous use of the knife. In this way they may be gradually forced from their position into the cavity of the uterus, and thus reduced to the variety (b). More decided measures, however, are necessary where great hæmorrhage exists. In such cases, having opened the cervix as already stated, introduce a probe-pointed bistoury, the blade lying flat upon the index finger until a point above the tumor is reached. Then, turning the edge of the knife towards the tumor, cut deeply into its substance. By this means severe hæmorrhage may sometimes be checked when all other means have failed. Ergot should be administered; also antiseptic remedies by the mouth, lungs, and vagina. Sulphurous acid gas is unsurpassed

as an antiseptic, and may be easily manufactured for inhalation by placing sulphur on a hot fire-shovel, carried through the chamber of the patient. It is readily tolerated by patients, even in very weak states of the stomach. In interstitial fibroids proper (*d*), Dr. Atlee was of the opinion that ergot was best used when periods of intermission from its use were allowed. He spoke very highly of the use of sorbefacients, especially muriate of ammonia, which he had been using for many years with the happiest effects. These tumors increase in size as the period of menstruation approach, and lessen when that period has passed. They often attain a great size, determining a large supply of blood to the uterus, and are thus the cause of great haemorrhage.

Those fibroids occurring under Class II., not giving rise to haemorrhage, were classified as interstitial subperitoneal fibroids; sessile subperitoneal fibroids; pedunculated fibroids; and interstitial cervical fibroids. Myomatous degeneration of the uterus was mentioned, and extirpation of the uterus by abdominal section recommended in severe cases.

Fibro-cystic tumors, called sometimes soft tumors, he thought might be benefitted by galvanism. Ergot has no value in the reduction of these, but he administers grs. x ammonia mur., *ter die*, and applies it also externally for its sorbefacient influence. In some cases he has seen their entire disappearance under the mode of treatment.

Dr. Simon Fitch, of New York, read a paper on "Paracentesis, Aspiration, and Transfusion."—He spoke of paracentesis as once performed with the blunt, awkward instruments of the last generation; of paracentesis as performed by modern instruments; and contrasted these methods with paracentesis as it should be performed with the "dome-shaped trocar." A trocar should be easy of insertion, harmless after introduction, capable of being used as a probe adaptable to an aspirator, should give free exit to all fluids, and leave in the skin or tissue wherever

introduced a clean incised wound. In all the trocars heretofore used, the canula was made to inclose the stylet. It is difficult to introduce the canula in some cases, owing to the resistance of surrounding tissue, *e. g.*, in the scrotum and the bladder. An injecting material, when thus used, frequently finds access to the cellular tissue, often giving rise to very troublesome inflammation. The "dome-trocar" consists in a canula enclosed in a tube, pointed at the extremity, the slope having an angle of 45° with the surface of the canula. The proximal extremity was curved, and so made that a rubber tube could be readily attached. When the stylet is introduced the canula is thrust forward, but its end is closed, "dome-shaped," and at one side is a large curved fenestra. The rounded extremity of the canula permits it to be used as a probe while inserted in a tumor, with no possible danger of wounded the tissues. This trocar could be made of all sizes, and was applicable in a great variety of cases. The author claimed it to be of special value in transfusion, one trocar being applied to each end of a rubber tube having a bulb in the middle, in which case immediate transfusion could be practised.

Dr. Atlee, of Philadelphia, said he had used the instrument presented by Dr. Fitch, for more than a year and a half, and in upwards of forty cases of ovariotomy. He looked upon it as a perfectly safe instrument, and considered it very valuable in multilocular cysts in passing from cyst to cyst. No fluid escaped about the insertion of the canula, soiling the clothing of the patient and interfering with the neatness and cleanliness of the operation.

Dr. Trenholme, of Montreal, presented a paper on "Uterine Hæmorrhage."—He confined himself to a form of hæmorrhage he had met with in pregnancy, which had never yet received attention from obstetricians. He had been called to see a woman several months pregnant, who had suffered from hæmorrhage for more than three months. An examination of the uterine cavity

showed that the amniotic membranes had formed no attachment to the uterus, except on the right, extending upward from a point near the cervix, to position above the entrance of the right Fallopian tube. The mucous membrane of the entire left half of the uterus, including the left Fallopian tube, was free from any attachment, and proved to be the source of haemorrhage. The foetus was dead and removed. He thought such cases might assist us in solving the problem of super-foetation.

Dr. White, of Buffalo, read a paper on "Chronic Inversion of the Uterus."—He has met with twelve cases since 1858, when he first successfully operated for the reduction of a case twelve years' standing, and he had succeeded in reducing every case he has met with. From his experience, he believes that every case, of whatever standing, may be reduced. Failure to reduce heretofore has consisted in a lack of keeping up pressure upon the inverted organ for a sufficient length of time. The average duration of the operation in his hands has been over an hour, and the cases operated upon have been of all degrees of standing, from six months to twenty-two years. The patient should be placed on her back, with the thighs flexed, and feet and knees supported by assistants. The rectum and bladder should be emptied beforehand, and the patient anæsthetized. He uses a retractor, one end of which consists of a cup-shaped piece of India-rubber placed upon a hard rubber stem, about eight inches long, and curved to meet the requirements of the pelvis, while attached to the proximal extremity is a steel spring, conical in shape, the base of which is intended to be placed against the breast. By this means the hand is relieved, which, during the operation, should encircle the inverted uterus resting in the cup-shaped extremity, and thus direct the power applied. The gradual pressure will stretch the vagina, whose upper extremity will retract, the cervix thus permitting the passage of the fundus. When that has once passed to the level of the os, a large rectal

bougie may be substituted, and the pressure continued until the organ is entirely replaced. Except in recent cases, Dr. White does not believe that pressure applied to the fundus will produce "dimpling" of it, and he considers the reduction of the organ, *as a whole*, necessary.

"The Comparative Value of Caustics and Astringents in the Treatment of Diseases of the Conjunctiva, and the Best Mode of applying Them."—Dr. Henry W. Williams, Professor of Ophthalmology in Harvard University, the Reporter, considered (1) Affections of the conjunctiva in which neither caustics nor astringents are indicated. (2) The various forms of conjunctivitis, and the extent to which caustics or astringents may be usefully applied. (3) The modes of applying these remedies to best advantage; (4) Complications, in which the conjunctivitis is the result of other morbid processes, or in which the existing morbid conditions are the consequence of previous conjunctivitis, with the treatment of such complications.

The conclusions offered by the Reporter were, after slight amendment, adopted by the Section, as follows:

1. In a considerable number of essentially transient affections of the conjunctiva and in pterygium or other growths, no active treatment by caustics or astringents is required.
2. When disease affects only a limited portion of the conjunctiva, as in phlyctenular inflammation, the mildest stimulating or astringent remedies are usually sufficient.
3. In the acute and chronic forms of general conjunctivitis, astringents are, as a rule, safer, as well as more efficacious than caustics, and therefore better adapted to the requirements of the general practitioner.

"Present Condition of Evidence Concerning Disease-germs."—The conclusions of the Reporter, Dr. Thomas E. Satterthwaite, of New York, after slight modifications, were adopted by the Section:

1. That so far as enquiry has been made as to the results of the active principles in infective diseases, it is probable that in a certain number the matter is particulate or molecular in form, and in the instances named, in no sense a soluble substance.
2. That in regard to the causes of septicæmia, pyæmia, puerperal fever, erysipelas, and hospital gangrene, and in cholera, small pox, the carbuncular diseases of men and animals, of typhoid and relapsing fevers, and diphtheria, there is no satisfactory proof that they are necessarily connected with minute vegetable organisms.
3. That the real nature of these causes is still uncertain.

KAOLIN IN GLEET.

This substance, first recommended in gleet by Dr. Godon, of New York, is highly extolled in the *Medical Times and Gazette*, by Mr. John Chiene, of the Edinburgh Royal Infirmary. It is mixed with water, or with oil and water, so as to make a very thick paste, which is placed in the glass syringe and injected very slowly into the urethra night and morning, after micturition; a piece of lint is then placed over the meatus, and the prepuce drawn forward to keep the lint in position. The kaolin at the meatus soon dries, and the plug of kaolin remains in the urethra. It is retained with difficulty during the day, but at night there is no difficulty if the case be chronic and the injection be performed very gradually.

The good effects are undoubted. The true explanation of its action may be questioned. It may simply act as an antiseptic as stated by Dr. Godon; in my opinion however there are some grounds for supposing that it acts mechanically. I have used it with great success in balanitis and in soft chancres with phimosis.—*Medical and Surgical Reporter.*

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

*ANALYSIS OF ELEVEN SPECIMENS OF THE "NATIVE SULPHIDE OF ANTIMONY," SOLD IN PHARMACY. By WM. C. SHEFFIELD, Ph. C.**

These samples of "black antimony," or "black sulphur," as it is often called, were obtained at as many different retail drug stores, in four cities in Ohio and Michigan. They were subjected to qualitative and quantitative analyses, and the following *per centages* obtained:

	Antimonious Sulphide.	Arsenious Sulphide.	Carbon, as Charcoal.	Silicious matter.	Ferrous Sulphide.	Calcium Carbonate.	Magnesium, as Sulphate.	Total determined.
No. 1.....	31.5	6.6	8.9	17.2	2.5	22.0	7.5	96.2
" 2.....	0.0	1.2	16.5	73.5	1.5	3.5	1.6	97.8
" 3.....	0.0	trace.	12.5	67.5	4.4	5.5	3.7	93.6
" 4.....	0.0	4.2	34.7	7.0	6.2	22.0	22.8	96.9
" 5.....	0.0	1.2	55.5	37.5	2.3	1.1	0.9	98.5
" 6.....	0.0	0.0	11.7	79.3	7.5	0.0	0.0	98.5
" 7.....	0.0	0.0	45.6	9.0	1.1	26.6	13.5	95.8
" 8.....	0.0	0.0	20.0	77.5	1.1	0.0	0.0	98.6
" 9.....	0.0	0.0	28.4	33.8	4.6	20.9	10.3	98.0
" 10.....	0.0	0.0	60.6	14.3	1.6	14.2	6.6	97.3
Average.....	3.1	1.1	20.4	41.6	32.8	11.6	6.7	
No. 11.....	Very nearly pure antimonious sulphide, with a trace of arsenic.							

These results may be of interest to some one curious to know whether *any* dispensing pharmacist ever makes all his antimonial preparations as provided by the "Pharmacopœia." Also, they may be of interest to Mr. Bergh, of New York.

* Taken with the two next following articles from "Contributions from the School of Pharmacy of the University of Michigan," communicated by Prof. Albert B. Prescott," in the September number of AMERICAN JOURNAL OF PHARMACY, p. 389.

VALUATION OF EIGHT SAMPLES OF PRECIPITATED SULPHUR, ALIAS MILK OF SULPHUR, AS FOUND IN THE MARKET. By W. L. DIETRICH, Ph. C.

These samples were obtained at different dispensing pharmacies, six in Grand Rapids and two in Ann Arbor, Michigan. They were all sold as Precipitated Sulphur, or Lac Sulphur—the distinction between these terms which the law has enforced in Great Britain not being regarded here.

No. 1 contained 43.6 p. c. of calcium sulphate.

No. 2 " 23.9 " " "

No. 3 was free from calcium sulphate.

No. 4 " " " "

No. 5 contained 47.7 p. c. of calcium sulphate.

No. 6 " 47.3 " " "

No. 7 " 46.2 " " "

No. 8 " 23.7 " " "

No arsenic, no free sulphuric acid and no other impurity, save a third of a per cent. of silicate in Nos. 3 and 4, was found in any of the samples.

Evidently six of the eight specimens were manufactured by precipitating the lime solution with sulphuric instead of hydrochloric acid (a process having older than centennial authority¹) and, therefore, represent that useful article (having all the virtues of sulphur in a more eligible form, etc.) which our better regulated British cousins in pharmacy are permitted by their rigorous magistrates to sell as milk of sulphur, but not as precipitated sulphur.

¹ "The London *Pharmacopœia*" of 1720.

ANALYSIS OF SIX NOSTRUMS SOLD AS AGUE-CURES. By O. L. CHURCHILL, Ph. C.

Five of these articles were found to contain one or more of the cinchona alkaloids (chiefly the cheaper alkaloid); the remaining one contained no alkaloid. None contained arsenic, strychnia, or mercury.

The quantitative determination of the alkaloids, from well known difficulties, is presented as only approximate. The following was the general plan of separation, modified in several particulars as found necessary for each mixture. From a weighed portion of the mixture, the alcohol, if any, was evaporated; the residue diluted with acidified water and filtered (more than once if need be); the filtrate precipitated by a slight excess of caustic soda; in most cases, the precipitate dissolved in acidified water, the solution concentrated and dissolved with strong alcohol, the filtrate evaporated and the residue dissolved with water. Care was taken to avoid loss, by well washing the residues of extraneous matter, and not washing the precipitates of alkaloid at all or but slightly. Taking a final precipitate by caustic soda, the alkaloids were then approximately separated from each other by use of ether as a solvent, potassium iodide to precipitate quinidia, potassium sodium tartrate to precipitate cinchonidia, etc.¹

1. "Ayer's Ague-Cure." Each box contains six fluidounces of a dark red syrupy liquid, with a very slight white sediment. Taste, very bitter and slightly peppery, with a slight taste and odor of winter-green oil. An alcholic extract (tincture) of cinchona bark, with additional and amorphous cinchona alkaloids (chinoidin), heavily saccharine and slightly aromatized. It contains a resin which presented the physical properties and gave apparently the physiological effects of podophyllum resin, but it was not so far separated from cinchona constituents as to be positively determined. It has free and combined sulphuric acid and the white sediment is calcium sulphate (from the calcium salts of the bark.) In *one fluidounce*:

Amorphous alkaloids (Chinoidin),	.	3.2	grains.
Cinchonia,	.	3.0	"
Cinchonidia,	.	0.7	"
Quinia,	.	0.8	"
Quinidia,	.	1.0	"
<hr/>			
Total,	.	8.7	"

The cost of a bottle will not exceed 35 cents—the price being at wholesale, 65 cents, and at retail \$1.

2. "Wilhoft's Antiperiodic Fever and Ague Cure." The bottle contains four fluidounces of a thin, dark red liquid, with the odor of cinchona bark, a very bitter and acid taste, and acid reaction. It consists essentially of an infusion of cinchona bark made with water containing aromatic sulphuric acid (like those of the U. S. P.), and probably with an addition of quinia sulphate. One fluidounce contains 3·0 grains of quinia and 5·4 grains of free and combined sulphuric acid (1·5 grains free). Cost of a bottle, not over 25 cents; price, \$9 per dozen, \$1.50 per bottle.

3. "Christie's Ague Mixture." A bottle contains seven fluid ounces of a very dark, syrup liquid one-fourth filled with sediment, and having a very bitter and peppery taste and an odor of common molasses. The sediment was powdered capsicum and a little resinous matter. The solution consists of a tincture of cinchona bark (the alcohol being 30 per cent. by weight), with cinchonia sulphate, and common molasses. Cost, not over 25 cents per bottle; price, at wholesale, 62 cents; at retail, \$1.00.

4. "Peterman's Michigan Ague Cure." Each bottle contains five fluid ounces of a red, syrupy liquid, with much resinous sediment, a very bitter taste, and odor of cinchona. Contains an alcoholic extract of the bark, with chinoidin as the chief medicinal agent, and with a little sulphuric acid and syrup. Cost, complete, not over 25 cents per bottle; price, at wholesale, 60 cents; at retail, \$1.00.

5. "Jayne's Ague Mixture." In each bottle, seven and a half fluid ounces of a mixture having an odor and taste of rhubarb, dandelion and common molasses. It contains quinia sulphate and traces of other cinchona alkaloids, but not enough to render the mixture very bitter. The alkaloids were, with some difficulty, separated by benzene in presence of alkali; other means having failed. Cost, about 35 cents; price, at wholesale, 60 cents; at retail, \$1.00.

6. "Rhodes' Fever and Ague Cure, or Antidote to Malaria."

In each bottle, twelve fluid ounces of a black turbid liquid having a sweet and astringent taste. On standing, the sediment filled one-third of the bottle. The sediment is charcoal. The solution contains a little tincture of chloride of iron, partly reduced to ferrous salt by sugar, which is present; also a trace of sulphuric acid, (a trifle of ferrous sulphate may have been added). Nothing more. "Bottle to be well shaken," etc.; "one tablespoonful three times a day." "Most people could take three times the amount without any uncomfortable feelings." "Persons who find it to bring on unwished-for actions, should place the contents of two or more bottles in an open dish in their sleeping apartments." Price, at retail, \$1.00.

Selections and Translations.

SALICYLIC ACID AS ANTIPYRETIC.

Dr. C. A. Ewald of Charity Hospital, Berlin, writes as follows in the *Practitioner* concerning salicylic acid :

Salicylic acid is a most valuable antipyretic when administered for this purpose. It is necessary that each dose be a large one, as small or divided doses have little or no effect. Generally speaking the minimum dose required to reduce the temperature is five grammes (77 grains). Should such a dose have no effect one may after four or five hours, with safety, give a second, or indeed even a third similar dose. I have seen cases in which 15 or 20 grammes have been given during twenty-four hours without any ill effect. The salt is readily soluble in water, and is taken by most patients without complaint. In those rare cases in which malaise or vomiting occur three or four drops of chloroform is sufficient to remove them. I have collected the results of one hundred single doses in cases of typhoid, of nearly equal

severity. In order to test the value of the drug more accurately it was always given at mid day, before the usual afternoon rise of temperature. Almost immediately the temperature began to fall, the maximum result being reached in most cases, from four to five hours after the administration of the medicine, but in some cases not less than eighteen to twenty hours were required. The subsequent rise of temperature was as gradual as its fall, but in mild cases it never reached the same height as before.—*Braithwaite's Retrospect.*

[The above doses are certainly very heroic and we should hesitate with our present knowledge of the acid to employ it in this manner. The gratifying results however claimed by Dr. Ewald would seem to justify its trial in the doses he proposes.—Ed.]

CHLORAL PLASTER.

For neuralgia, rheumatic pains, etc., use the ordinary emplastrum roborans, and powder it with chloral. Apply the plaster to the affected part, and have it from twenty-four to forty-eight hours. When taken off the skin is found studded with vesicles; these are to be pricked with a pin, followed by a dressing with simple ointment. The pain vanishes long before the vesicles are dried up.

Ars, ante omnia veritas.

Editorial.

INTERNATIONAL MEDICAL CONGRESS.

It was a grand thought whose conception, a little over a year ago, by the profession of Philadelphia, originated the Congress which convened in that city on the 4th ult. It was meet that the medical profession of America should manifest to the world in some such formal manner, in this centennial year, its progress

during the hundred years of national independence. Whether the standing, reputation and ability of its members, or the amount and nature of the work they accomplished, be considered, the meeting was the most important of any which has occurred in the history of this country. We feel that no apology to our readers is necessary for the space we have given to a record of its proceedings. A less extended report would have failed to convey a proper conception of the magnitude of the work done. The only foolish thing the Congress did was to pass a resolution intended to render such a report impossible—the resolution forbidding the publication in any medical journal any of the proceedings, in whole or in part, before they had appeared in the official report. It is but justice, however, to state that the resolution was offered in the interests of a leading medical journal, which had neglected having a report prepared, and that as soon as this fact became known, the resolution was, by almost unanimous consent, regarded as a dead letter. The absurdity of any such action by an intelligent body in these days was at once apparent. The only unfavorable criticism we have seen passed on the management of the Congress, is upon the fact that Americans were selected to prepare a vast majority of the leading papers in the various sections. In our opinion, however, the circumstances of the meeting rendered this fact rather a favorable feature of the Congress. While essentially a Congress of the profession of all nations, it was by no means the least object of the gathering to convince our brethren from abroad that the estimate which they have been prone to place upon us, has, in the main, been an erroneous one. We think this object was most effectually accomplished. The master minds of the old world expressed surprize at what they saw and heard, and we have probably heard the last of the taunt, "Who reads an American book?" The forthcoming report of the proceedings of the Congress will be essentially a report of the status of American medicine, and will doubtless stand a comparison with the reports of previous International Medical Congresses. No physician in

this country should fail to possess himself of this monument to American genius.

The plan of appointing reporters to the several sections was a most happy one, and furnishes a suggestion to the chairmen of sections in the American Medical Association. It is a vast improvement on that of trusting to what may be spontaneously presented for consideration. There is no valid reason why the meetings of the American Medical Association should be a whit behind that of the Congress which has just closed.

UNIVERSITY OF MICHIGAN.

Notwithstanding the gloomy forebodings and direful prognostications of some, with whom the wish was doubtless father of the thought, the medical class of the State University opens its present session with prospects which are really a surprize to the warmest and most hopeful friends of that institution. There are a number of reasons why the present class might have been expected to be smaller than its predecessors ; and these reasons, too, entirely independent of the disturbance of the past eighteen months. The wide-spread financial depression has affected all interests, and medical colleges have formed no exception. Schools both east and west, which have been allowed to pursue the even tenor of their way, disturbed by no factious opposition, and enjoying the confidence of all, and the material and moral support of leading and influential members of the profession, have suffered, and it would not have been strange had the medical college of the University at this critical period shown a marked falling off, as compared with previous years. The new departure of this school in exacting certain preliminary literary qualifications on the part of all matriculants is also known to have had the effect both of deterring some from making application, and of diminishing the number of students by the actual rejection of applicants, who have been received with open arms by rival schools, whose prosperity is proportioned to the size of their

classes. There is still another reason, and that is the growing feeling that the medical profession, in common with others, is being over-crowded, and the facts of the past few years are certainly calculated to intensify this feeling. The ratio of physicians to the population of this country is one to about six hundred. These facts are becoming known, and young men are beginning to realize the additional fact that there other fields which promise a larger and more immediate return for the intelligence and industry invested.

In spite, however, of the above reasons, which we think will be conceded to be plausible, the medical class of 1876-7 already numbers but twenty less than the whole number in actual attendance at last session, and the difference will doubtless be lessened after the fall elections.

From a candid survey of the field, we cannot, therefore, believe but that the introduction of homœopathy in its present relations, so far from injuring the medical department, has, from the advertisement which the discussion in the medical journals of the country has given it, been a positive good. The large class in attendance is certainly a very flattering endorsement by the profession of the faculty's position. We are even credibly informed that the student of a prominent member of the "Committee of Nine," to whom this position was so odious, is a member of the graduating class. It is cheering to note such indications of returning reason. We have not yet heard of any other member's sending his student to the ostracized institution, but should not now be surprised at anything.

We may remark, by the way, that the facilities of the medical department this winter will surpass those of former sessions. The new state hospital is now ready for occupancy. It is a model structure, built after the latest and most approved plans, and has no equal in the state or superior in the country. The professional staff has also been strengthened by the appointment of Prof. Burt G. Wilder, of Bowdoin College and Cornell University, to the chair of Physiology.

Reviews and Bibliographical Notes.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM.—By Wm. A. Hammond, M.D., Prof. of Diseases of the Mind and Nervous System in the Medical Department of the University of New York; President of the New York Neurological Society, etc. One hundred and nine Illustrations. Sixth edition, enlarged and improved. Pp. 883. New York: D. Appleton & Co. Detroit: E. B. Smith & Co.

The sixth edition of Dr. Hammond's great work is before us. The perusal we have given it makes it difficult for us to speak of it in language that may not seem extravagant. It is not too much to say that a more complete and concise text-book on nervous diseases does not exist. The fact that it has passed through five editions attests its popularity, and it would be a work of supererogation to enter into details concerning a work which has received such a tangible endorsement by the profession. Suffice it to say that the present edition brings the subject on which it treats fully abreast of the times. It is true there are some points on which the author cannot be said to accord with what we should be inclined to regard as strictly orthodox, but these slight imperfections are all the more apparent because of the general excellence of the work.

The mechanical execution of the book leaves nothing to be desired.

THE PATHOLOGY AND TREATMENT OF CHILDBED.—By Dr. F. Winckel, formerly Professor and Director of the Gynæcological Clinic at the University of Rostock. Translated from the second German edition by James R. Chadwick, M.D., Clinical Lecturer on Diseases of Women at Harvard University. Pp. 484. Philadelphia: Henry C. Lea. Detroit: E. B. Smith & Co.

This is another of those valuable translations of German works with which the profession of this country is becoming so familiar. Dr. Winckel is the standard authority in this matter in Germany, and it is but fitting that a translation of his work should be added to American medical literature. The introduc-

tion is devoted to a consideration of the normal state of the genitals, lochia, breasts, pulse, respiration, temperature, and functions of the kidneys, skin and intestines of the puerperal woman. This is a commendable feature of the book, and one which the student will appreciate. The work proper is divided into three sections. The first treats of puerperal affections of the external and internal genital organs; the second of puerperal diseases of the breasts; and the third of affections of other organs occurring in connection with childbed. These subjects are treated throughout with that fullness and attention to details and minutiae which is so characteristic of the German mind. The author has had a rich clinical experience, and he has made use of it in presenting to his readers an eminently practical work.

Dr. Chadwick has given us an excellent translation.

THE THEORY AND PRACTICE OF MEDICINE.—By Frederick T. Roberts, M.D., B. Sc., M. R. C. P., Fellow of University College, Assistant Physician and Assistant Teacher of Clinical Medicine at University College Hospital, etc. Second American from last London edition. Revised and enlarged. Pp. 920. Philadelphia: Lindsay & Blakiston. Detroit: E. B. Smith & Co.

This is a season when students are on the look out for text books, and there are very few lists recommended by college professors which do not contain the name of Roberts' Theory and Practice. The former edition of the work has secured for it the confidence and esteem of the profession. The present edition contains considerable which does not appear in the former. It has a new chapter on Acute Specific Diseases. We are surprised, however, to observe no reference to some valuable articles which have recently been introduced into therapeutics, and among these notably the use of salicylic acid in rheumatism. We presume, however, that there are few works of any nature which have not their imperfections, and Dr. Roberts' has unquestionably as few if not fewer than any other text book.

We noticed the former edition at some length, and have only to add here that the present contains enough in addition to make it the best text book recently issued from the press.

**METEORLOGICAL REPORT for September. C. HENRI LEONARD,
M.D., Observer for STATE BOARD OF HEALTH.**

ERRATA. — Under "Temperature" of last month, the last clause should read: "But the days of *highest* temperature are *rarely* the days of highest humidity."

This month I noticed that it was on the days of highest absolute humidity (the 7th and 8th) that I had most of diarrhoeal symptoms in my patients. There were several other days of as *high* and *higher* temperature (average as well as maximum), but none with so great an absolute humidity.

BAROMETER. — Highest, 30.263; lowest, 29.740; range, .523; average, 29.952.

TEMPERATURE. — Highest, 77 (on the 20th); lowest, 39 (on the 30th); range, 38; average, 59.1. The *lowest* in maximum, as well as mean, temperature for any September since the Signal Service was established here, '74 was the warmest September; the maximum then being 97, and the mean, 66.7.

WINDS. — Prevailing direction, East; (7 days E.; 7 days easterly.) Greatest velocity, 24 miles, an increase of 10 miles over last month. Total number of miles travelled, 4,487 (about in keeping with the four preceding Septembers); a gain of over 1,000 miles over last month. At one observation there was a "calm;" at several the velocity was but one mile per hour.

CLOUDS. — Clear days, 6; cloudy, 16; rain or *snow* (see "Miscellaneous Phenomena" below), 20; a loss of 3 clear days from last month's showing, a gain of 9 cloudy, and a gain of 5 stormy ones.

RAINFALL. — Greatest daily, .46; this was on the 1st. Total for the month, 2.81. In 1872 we had 3.84 inches: in 1873, 3.28 inches; in 1874, 0.67 inches; in 1875, 2.10 inches.

MOISTURE. — See under "Errata," above.

OZONE. — A slight increase over last month, the maximum coloration, after 24 hours exposure, being 2; this occurred on the 13th and 17th inst.

MISCELLANEOUS PHENOMENA. (FROM SIGNAL OFFICE.)

Though rain has fallen on 20 days during the month, but one storm has occurred, namely, on the 28th inst., which was an extensive one, being experienced the entire length of the lake region. Its greatest violence was felt at the northwestern lake ports. Fogs have occurred on the 7th, 16th, 18th, 24th and 25th insts.; that of the 7th inst. was unusually dense. Thunder storms occurred on the 3d and 26th insts. Hail fell on the 26th and 29th insts. Snow, cemented in masses of one-half inch in diameter, fell at 3.10 P. M. of the 26th inst. Frost was observed on the 13th and 16th insts. Lunar coronæ were observed at 9 P. M. of the 4th inst., and 10.30 P. M. of the 30th. Lunar halo at 10.30 P. M. of the 4th inst. Solar halo at 7.15 A. M. of the 20th inst. No auroras have been observed during the month.

RIVER OBSERVATIONS.

Greatest depth of water, 22 feet; highest temperature, 71.5; lowest temperature, 57. River muddy on the 10th, 11th, 12th and 13th insts.

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Original Communications.

ON THE DIAGNOSIS OF SYPHILITIC AFFECTIONS OF THE SKIN. *Read before the Ky. State Medical Society, by J. A. OCTERLO-
NY, M. D.*

Among the protean forms in which the syphilitic poison manifests its presence in the human organism, few, if any, are more curious and interesting than those which affect the skin.

The frequency with which they occur renders a practical and familiar knowledge of them more necessary than if they were but rarely met with.

A correct diagnosis of syphilitic eruptions is not always easy ; in fact, it is often the very reverse.

The truth of this statement will be admitted by all who have seen much of cutaneous diseases, and is further proved by the mistakes which are not unfrequently made, even by men of con-
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siderable experience and of respectable attainments in the profession.

That such mistakes should continue to occur, is not surprising, when we call to mind that syphilitic eruptions, as a class, have not a single feature which can be properly said to be *pathognomonic*.

There are important features, which, when present, very plainly point to syphilis as the cause of a given eruption, but these may be absent or so feebly marked as to be readily overlooked.

An eczema or psoriasis is sometimes pronounced to be syphilitic, simply because the bearer at one time had syphilis, or, perhaps, merely a simple chancre. I have myself seen a syphilitic lepra mistaken for what was called a "simple rheumatic rash." A hurried examination, an off-hand diagnosis of syphilis, has sometimes destroyed the peace and happiness of a home, when a critical investigation of the case would have shown its simple and non-specific nature.

There are many circumstances which may contribute to make a case obscure and its real nature difficult to ascertain. The patient often wilfully, and sometimes through ignorance, gives his physician faulty and misleading information in regard to his previous history and disease.

In some cases syphilis writes itself out in characters so plain that "who runs may read;" the blood poison which gives rise to the eruption stamps the latter with remarkable features, and gives to it an individuality all its own. In other cases, the syphilitic poison seems to act as a more or less powerful modifier of a simple eruption which is accidentally developed in a person laboring under syphilitic taint; or an individual bearing a simple eruption may contract syphilis. In these the modification of appearance and course are subject to great variation—sometimes well marked, and in other instances very slight, consisting

chiefly or solely in a rebelliousness to all but a mercurial plan of treatment, as in the following case :

J. H., age 41 ; born in Ireland ; occupation, engineer. He has always been very strong and healthy. Sixteen years ago he had an eruption on his body in all respects exactly resembling the eruption he had while under my charge in the Louisville City Hospital during the winter of 1876. Four years after the first appearance of this lesion of the skin he contracted constitutional syphilis. He was treated for the latter disease, and appears to have had light and not very protracted secondary manifestations. At present, twelve years after infection, he is in good health, with the exception of varicose veins in the legs and an eruption of psoriasis aggregata on both forearms. This eruption appeared four years ago, and since then has never entirely left him. The scales are thin, glistening and silvery, loose, and shed in abundance ; the patches are not annular, the subjacent derma is reddened, but there appears to be little infiltration and thickening. Itching is a marked and constant symptom. These facts were noted as the "present condition" of the patient at the time he first came under my treatment. A number of internal remedies and external applications were tried, and each was continued long enough to make it clear that it had no curative effect upon the disease. Finally, the patient was put upon mercurial treatment, when the eruption readily yielded and soon disappeared.

This was evidently a case of simple psoriasis in a person, who, having had syphilis twelve years before, was not yet completely free from taint. But the only point of difference from an ordinary psoriasis was found in its obstinacy to arsenical and other remedies, and its amenability to mercurial treatment, and only to it.

In still another class of cases the patient has had, or says he has had, syphilis long ago ; perhaps for years he has had no

manifestations of the disease, nor has he been recently infected. But he presents an eruption. What is its nature? In view of the previous history it is likely to be pronounced syphilitic, and this diagnosis is as likely to be wrong. The eruption may be, and often enough is, a simple one, and requiring no specific treatment. A course of mercury under such circumstances would do harm, at best it would do no good.

The same *elementary lesions* are common to both *syphilitic* and *simple* eruptions. There is only one lesion of the skin belonging exclusively to the syphilitic constitution, and that is the *condyloma lata*, to which I will refer again.

The elementary lesions ordinarily recognized, exanthema, papulæ, squamæ, vesiculæ, pustulæ, maculæ, and tuberculæ, may one and all be due to syphilis, or they may exist in persons entirely free from such taint.

For purposes of study, syphilitic affections have been conveniently grouped in three classes:

1. *The Affections of Congenital and Infantile Syphilis.*—By the first of these is meant that the disease is inherited, and that the patient is already infected at the time of birth, though there may be no eruption until the child is several weeks old. I have seen infants showing indubitable signs of syphilis at birth, but the cutaneous manifestations of inherited syphilis seldom occur so early. I have known a syphilitic eruption on the skin to first appear on the second day, and on the tenth day, but generally it occurs on from the *third week* to the *sixth month* after birth; the latter is rare, and still later manifestations are exceedingly rare.

Infantile and congenital syphilis, though used as synonymous, are not convertible terms.

An infant may become infected after birth, and in various ways, as by suckling a syphilitic nurse with specific lesions on the nipple. Bumstead admits that an infant may possibly be

come infected through the milk of a syphilitic nurse. Tilbury Fox expresses a positive opinion in favor of the occurrence of infection by this means.

Zeissl has seen syphilitic nurses infect infants suckled by them, even when after a mercurial course there were no syphilitic lesions to be seen, either on the nipple or the other parts of the body.—(Baumler.)

The disease may also be communicated to the infant in other ways, as by ritual circumcision, vaccination, &c., &c.; at any rate, it is clearly seen that the two terms—congenital and infantile—in their application to syphilis, do not always mean the same thing.

In other words, *congenital* syphilis is always *infantile*, but *infantile* syphilis is not always congenital.

The congenital form of the disease may be derived from a mother contaminated before or after conception, or from a syphilitic father, the mother being healthy,* and before he is affected with tertiary symptoms; and lastly, from father and mother, when both are syphilitic.

2. *The second class* includes the secondary lesions; according to Ricord and among them are found some of the most contagious local manifestations. Baumler truly declares that the secretion of the "condyloma lata" is "in the highest degree infectious," and it is believed a very large proportion of syphilitic cases is due to this means of infection.

3. *The third class* is composed of those affections which are remote, and are usually called *tertiary*.

They are usually thought to be *non-contagious*. I know of only two cases of transmission of syphilis in the tertiary stage; one was related to me by my friend, Dr. F. C. Wilson; the other

*For information on this point read a brochure recently published by Dr. R. W. Taylor, New York. It is an able and interesting paper.

is quoted by Bumstead in the second edition of his justly celebrated work on Venereal Diseases: "A certain surgeon operated upon a case of syphilitic necrosis of the skull in a patient who had had no secondary symptoms for several years. An abrasion upon the finger of the surgeon became inoculated, and a chancre and general symptoms followed in usual order."

Ricord has taught that tertiary symptoms cannot be hereditarily transmitted under their peculiar type, but to this doctrine more modern investigators appear to have adduced important exceptions, so far as subcutaneous and visceral affections are concerned, but I would strongly insist that in regard to the tertiary lesions of the skin Ricord is right.

I have never seen them transmitted by hereditary descent, certainly never under their peculiar type—that is, as lesions of the skin.

This division, while arbitrary, is of great practical utility, for, even with due allowance for the apparently erratic course pursued by the disease in many cases, it must be admitted that order and regularity in the development of its manifestations are of its most striking characteristics.

Many deviations from the regular course are to be ascribed to medication, which should always be taken into account in a doubtful diagnosis.

Familiarity with the cyclical progression of syphilis, and a knowledge of what manifestations are peculiar to each stage of the disease, will frequently afford important aid in diagnosis; but of this part of the subject a more detailed account will be given further on. However, in a paper of such limited scope as this, it is impossible to speak "in extenso" of individual syphilitic eruptions. My object is simply to present a concise account of the peculiarities which characterize, and of the means by which to distinguish syphilitic eruptions from others of a different nature, and thus to afford assistance in the diagnosis of

lesions often obscure, and not seldom confounded with others of a different nature.

To recognize these distinctions is important, not only for reasons already put forth, but also for the sake of scientific accuracy in itself.

It has already been remarked, that while syphilitic eruptions are, in many respects, peculiar, yet there is no pathognomonic sign by which alone their nature can be made out. It is rather upon a combination of features that the diagnosis depends, and the more numerous the combination, the more certain the diagnosis.

The history of the patient is of the highest importance. It must be ascertained, if possible, that he be really syphilitic, and whether the antecedent venereal disease was an infecting chancre or a simple chancre, or merely a gonorrhœa. Without this knowledge the history of the case is incomplete; with it, we become possessed of the first link in the chain of pathological sequences, and subsequent investigation becomes comparatively easy.

The general aspect of the patient should be carefully noted; a thorough examination of his whole body should always be insisted upon, and will often reveal important facts. It must be remembered that a number of the earlier syphilo-dermata frequently co-exist with the primary sore, a remaining specific induration and other signs of the syphilitic taint.

Thus the presence of primary sores, cicatrices, indurations on the genitals and glandular enlargements entitle us to *suspect* the syphilitic nature of an eruption.

Substernal tenderness co-existing with a cutaneous eruption renders the character of the latter very suspicious.

It is thought to be strongly indicative of acquired syphilis.

This symptom was first noted by Dr. Brodrick, in the Madras Quarterly Journal of Medical Sciences, October, 1862, and had

also been observed by Ricord. It is frequently associated with the secondary syphilo-dermata, and is found in the great majority of cases at some period of the secondary stage. What is the exact frequency with which it occurs, what is the earliest and latest period at which it occurs, and how long it usually remains —are points upon which accurate observations are still wanting.

There are many other manifestations whose co-existence with an eruption renders very probable the syphilitic nature of the latter. Among them may be mentioned cephalalgia, sore throat, alopecia, wandering pains in the bones, iritis, and periosteal enlargements.

The Color of Syphilitic Eruptions.—This has long been viewed as of importance in their diagnosis, and was at one time supposed to be pathognomonic.

It has been described as "copper color," or the color of the cut surface of a raw ham. According to Erasmus Wilson, it is in reality a reddish-yellow brown. At the outset of the eruption this color is absent, and toward the close it fades away, though it is usually of long duration. In some eruptions, mucous patches, for instance, it is never present; in persons of very dark complexion the excess of pigment prevents it from being recognized. Lastly, it must be remembered that this color is observed in some diseases of the skin entirely unconnected with syphilis. There is a well known skin affection in which the peculiar color is so conspicuous that it has led to the adoption of the name "copper-nose," yet this is a non-syphilitic lesion.

These sources of error must be borne in mind, and when so doing the color will be found to be a valuable factor in making a diagnosis.

Syphilitic Eruptions have a Marked Tendency to Assume a Circular Form.—When an eruption is annulated its syphilitic origin is not unlikely, often probable; when it occurs in incomplete rings, segments of circles, this probability becomes so much

strengthened as to amount almost to a certainty. As illustrative of this, let it be recalled how suggestive are the circles of lichen syphiliticum, and how strongly indicative of the secondary period are the incomplete rings of roseola and of lepra. The rings of erythema marginatum in infants are highly characteristic of congenital syphilis.

Even in the tertiary stage pustules and ulcers are prone to assume a perfectly circular shape.

But this rule is not without numerous exceptions. One must, therefore, not exclude syphilis because an eruption is not circular or annulated.

Syphilitic erythema and papules are often irregular in shape and distribution. Herpes, Lepra, Herpes Iris, and some other parasitic lesions of the skin, for instance, *Tinea circinata*, are ring-shaped or circular, but in the latter diseases the microscope will at once remove all doubt as to the character of the eruption by revealing the presence of a parasite.

The elementary lesions are essentially the same in syphilodermata and simple cutaneous eruptions; yet in the former they are often considerably modified by the blood poison. Thus it is observed that syphilitic papules are often a transition form from roseola. They are apt to undergo a further change into pustules, and then to ulcerate. The simple papular eruptions do not pursue this course; they are papular from the first, and remain so to the end.

Syphilitic vesicles are flatter, more permanent, and do not so easily break as do non-specific vesicles.

The crusts which form on syphilitic bullæ and papulæ are thick and prominent, uneven and stratified; they are greenish, firmly adherent, and present a peculiar aspect. Ulceration is usually going on under the crust.

Syphilitic ulcers are among the late manifestations. (The primary ulcers do not come under consideration in this connection.)

They may, however, arise early, as the result of ulcerating papules, vesicles, or pustules, and are then found to co-exist with these.

Under such circumstances the nature of the ulcers is not easily mistaken.

When syphilitic tubercles ulcerate it is found that the ulcers are never accompanied by superficial syphilodermata.

Syphilitic ulcers may also be due to suppuration and opening on the surface of more deep-seated lesions, gummy tumors, &c.

The appearance of these syphilitic ulcers is often peculiar; they are round or serpiginous, the edges are sharply cut, the floor is grayish and covered with a sort of false membrane. The surface of the ulcer is sometimes raised above the level of the surrounding parts. The pus is sanious, and around the edge may be made out an indurated base and a copper colored areola.

There is some danger of confounding these solitary and late ulcers with "lupus," but with care the differential diagnosis may always be made.

Almost all syphilitic eruptions are prone to terminate in ulceration; this is true even of those forms which, when simple, never ulcerate at all.

The cicatrices of syphilitic ulcers are circular or crescentic; the centre is more or less-depressed, reticulated, and of a dull, brownish-red color; afterward they become of a dead white. When not permanent, they leave in their place on disappearance a yellowish stain.

The absence of heat and itching in syphilitic eruptions has long been the subject of remark.

Indeed, the want of proportion between the eruption which often covers an extensive surface, and the local irritation, which may be almost *nil*, is quite characteristic. Unfortunately for this rule, some syphilitic eruptions do itch; and furthermore, others, which are not syphilitic, may not itch at all.

Mucous patches always itch ; so, also, do some moist forms of congenital syphilis.

Sometimes a patient bearing a syphilitoderma will complain of itching, when this is not due to the eruption, but to the presence of *pediculi* ; and nervous and untruthful patients will perhaps insist that an eruption is very *itchy*, while they are flatly contradicted by the condition of their skin, which shows no sign of having been scratched.

The local inflammation in syphilitoderma is always of a low grade, and they tend in a remarkable degree to *chronicity*.

Of course this is not altogether peculiar to them, for some simple eruptions also run a very protracted course, such as eczema, psoriasis, acne, &c., &c. But on comparing *syphilitic* with corresponding lesions of *non-specific* origin, one finds that the former are much more chronic. A simple roseola runs its course in a few days ; syphilitic roseola, unless shortened by treatment, may last for months. Simple lichen has a comparatively short duration, but I have known syphilitic lichen to endure for many, many months. This difference between simple and specific eruptions is sometimes of use in diagnosis, but other points must be considered along with it.

The seat of the eruption is also of diagnostic value. Psoriasis palmaris and plantaris are nearly always syphilitic. In a recent and most excellent clinical lecture on the Diagnosis and Treatment of Chronic Scaly Eruptions of the Palm of the Hand, by my friend, Dr. L. Duncan Bulkley,* of New York, he exhibited a case of non-specific psoriasis of the palm of the hand, and while clearly demonstrating the correctness of his diagnosis, he remarks : " Non-specific psoriasis of the palm is very rare ; indeed, some writers have indicated that it does not occur except when associated with psoriasis of other parts."

*New York Medical Record; March 18th, 1876.

Syphilitic squamæ are most frequent on the face and neck, the inner in preference to the outer aspect of the limbs, and do not affect the elbows and knees as usual in simple psoriasis.

Ecthyma of the hairy scalp is almost invariably specific, especially when confined to this locality.

Simple acne is always confined to the face and upper part of the trunk, and rarely extends to the upper extremities, while the syphilitic form frequently involves both the upper extremities and the legs, and may be confined to the latter.

The syphilitic nature of an ulcer may sometimes be inferred from its location. Non-specific ulcers are most frequent on the lower extremities ; excluding those which are due to scrofula, one may say that these ulcers are almost invariably caused by injuries, by varicose veins, or by both. Their seat is usually in the lower third of the leg and on its outer lateral surface. If, however, an idiopathic ulcer is found on the leg, in its middle or upper third, and posterior aspect, the *locality* becomes strongly suggestive of syphilis. If, in addition, the ulcers present features already mentioned as characteristic of specific ulcers, there can be no doubt as to the proper diagnosis.

Several cases of this kind have come under my notice. I will briefly allude to one of them. The patient had contracted syphilis several years before ; when I saw him he presented no eruption or other lesion, except a very large round ulcer in the centre of the left gastrocnemius. Before he came under my observation he had been treated by a very respectable physician, who appears never to have suspected the syphilitic nature of the case. Later he had gummata of the tonsils and soft palate, with destructive ulceration of these parts.

Idiopathic ulcers in the middle of the arm are likely to be syphilitic. When they are serpiginous, and possess other features already described, the diagnosis becomes sure.

My distinguished friend, Dr. Joseph W. Thompson, of Paducah, has also called my attention to the fact observed by him, that idiopathic ulcers of the back are very likely to be syphilitic.

Syphilitic eruptions are also characterized by their more general occurrence on the exposed regions of the skin, especially the scalp, the forehead, the cheeks, and the alæ nasi, rather than on the parts which are ordinarily covered.

Eczema and psoriasis sometimes become general, but when so their physiognomy usually becomes so characteristic that a mistake is scarcely possible.

Simple forms of these eruptions are more likely to involve a limited extent of surface. Those of syphilitic origin, on the contrary, show a marked tendency to become general, and involve almost the whole integument. They also engage the more deeply seated cutaneous structures to a greater degree than do the non-specific diseases of the skin.

The age of the patient may afford aid in diagnosis. Syphilitic rupia is only seen in adults. Pemphigus in new born children is almost always syphilitic, but the cases of pemphigus I have seen in adults have all been non-specific.

Ricord has observed and figured a case of syphilitic pemphigus in an adult, but the eruption was confined entirely to the soles of the feet; and in another case related by Bassereau, the eruption was found only on the palms of the hands. It may therefore be added that when pemphigus is limited to the palmar and plantar regions, it is very probably syphilitic. An important distinction between the non-specific and the specific eruption is this, that non-specific or non-epidemic pemphigus is never seen in children before the seventh or eighth month.

Polymorphism of Syphilitic Eruptions.—It is often said that skin diseases in general are prone to run together or into one another; this is true to a certain extent and in a certain way, and it is natural that it should be so.

Rash, papule, vesicle, pustule, ulcer, may be said to represent so many degrees of the inflammatory or nutritive disturbance upon which they depend ; differences being also produced according to the extent or depth to which the component tissues of the skin are involved.

But in cutaneous lesions due to syphilis, this "running together" is strongly marked and highly characteristic.

Polymorphism is the term used to designate this combination of several elementary lesions in the same person at the same time. It is not unusual to see at the same time in a patient such combinations as these: erythema with maculæ and mucous patches, or papulæ with squamæ and pustulæ, or squamæ, pustulæ and maculæ. In congenital syphilis I have seen pemphigus, erythema marginatum and tubercles at the same time. This tendency to polymorphism is especially marked during the early and active stages of syphilis ; it is not observed in the late eruptions of the acquired disease.

The successive evolution of elementary lesions is another phenomenon strongly indicative of syphilis. 'Tis true the same occurs in certain non specific diseases, but not to the same extent as in syphilitic eruptions. Certain portions of erythema develop into papules, a number of the papules after a while become transformed into vesicles or pustules, which gradually are covered with crusts ; these in time fall off, laying bare more or less excavated ulcers, which, on healing, may leave cicatrices, whose peculiarities have been already pointed out. In syphilitic lichen the papules become capped with scales and suppurate, and become phlyzacious pustules, ecthyma, etc.

In this way *polymorphism* is also developed ; but it may be observed independently of *successive evolution*, the different elementary lesions co-existing almost from their first appearance, and not passing one into another.

This continuous evolution of elementary lesions appears some-

what puzzling at first sight, but when once understood it becomes an aid both to diagnosis and to prognosis. For example: the earlier and more rapidly pustulation occurs in a given case of syphiloderm, the more profoundly infected is the patient, and the more severe will be the case.

Chronology.—The length of time after infection at which an eruption appears, constitutes an important element in the diagnosis of syphilitic eruptions.

Constitutional (secondary) symptoms of any kind never appear earlier than six weeks after infection, and are not delayed longer than six months, except by treatment.

In about one third of all the cases of syphilis, tertiary symptoms never appear at all. *Dr. Charles R. Drysdale expresses the belief that rather more than one-half of his patients with secondary rashes have had no tertiary symptoms whatever. When they occur it is rarely sooner than six months after infection, and often later.

The syphilitic cutaneous eruptions belonging respectively to the secondary and tertiary group, are of course governed by this chronological law.

Roseola, lichen and lepra are early secondary eruptions; but it must not be overlooked that the secondary stage may be greatly prolonged and marked by a series of relapses. Thus it happens that erythema annulata may be seen as late as twelve months after infection.

Syphilitic psoriasis has never been found earlier than four months after infection, but both this and papular eruptions may last several months.

Syphilitic condylomata constitute an *early* manifestation; they are prone to relapse, and may be the only form under which relapses occur. Sometimes they are the only manifestation within

*Drysdale.—*Hints About Tertiary Syphilis.* Archives of Dermatology, October, 1874.

the first year, but they are not apt to appear later than this, and never co-exist with *gummy tumors*.—*Baumler*. A case reported in *Nordiskt Medicinskt Arkiv*, by Prof. Hedenius, Upsala, Sweden, is of interest in this connection. The patient, aged 32, was a prostitute, who had been treated several times for *tertiary syphilis* during the last six years, and finally died in the hospital. The autopsy revealed the existence of a number of visceral and other tertiary lesions, such as necrosis of the skull, lesions of the oesophagus, intestines, lungs, &c.; and also *rupia*, with *condylomata* and fissure of the anus. This case presents several exceptions to the usual chronology of *condylomata*.

It has been previously noted that *condyloma* is pathognomonic of *syphilis*, but it is also to be remarked that there are two varieties, *condyloma lata* and *condyloma accuminata*. The latter has nothing to do with *syphilis*, and may occur after *gonorrhœa* and *chancroid*. It is the former that belongs to *syphilis* alone.

Impetigo may occur as early as during the third or fourth month after infection. *Eczema* never appears later than six months from the date of infection.

Psoriasis plantaris and *palmaris*, *pemphigus*, *rupia* and *tubercles* are either signs of *congenital syphilis*, or are *late* manifestations of the *acquired disease*. *Ecthyma* belongs to the advanced secondary period, and like all the late developments, is unsymmetrical and disseminated.

Rupia is never an early symptom of *syphilis*; although it may occur with secondary symptoms, it more frequently constitutes a tertiary lesion. When it occurs in the secondary stage the crusts are thinner, and it is accompanied by high fever of a remittent type. When it occurs in the tertiary stage it is as *rupia prominens*, and it is not often febrile.

Gummy tumors and *tubercular syphilides* are always non-febrile; they belong to the tertiary period, and are never associated with

condylomata, but amyloid degeneration of the internal organs often exists, especially those of the abdomen.

Baumler has never seen gummy tumors earlier than eighteen months after infection, but Zeissl has seen an ulcerating gummy tumor as early as four months after infection.

Eczema in infants is rarely, if ever, due to syphilitic taint; pemphigus, among the same class, is very often due to such origin.

From these facts it appears that there are *late* syphilodermata, which cannot be the result of recent infection, and *early* eruptions, which are never due to infection dating back several years. There are others again which characterize the inherited disease in children, and are never the result of acquired disease in adults.

In illustration: let it be supposed that years after syphilitic infection a case of roseola should occur. Is it a syphilitic rash? Roseola is one of the earliest syphilodermata. This must, therefore, be either non-specific or the patient has contracted syphilis *de novo*.

These and other points in the chronology of syphilis afford important aid in the diagnosis of specific from non-specific skin diseases, and should not be overlooked by any careful and judicious physician.

Syphilitic Fever.—Hutchinson, of London, has drawn a comparison between constitutional syphilis and the exanthematic fevers. In both, the starting point is contagion with a specific poison, followed by a period of latency. Local and constitutional symptoms then appear, among which are eruptions on the skin, and fever.

The circumstances under which this fever appears, and various peculiar features, render it of diagnostic importance, when other symptoms and the previous history have not sufficed to clear up the nature of the case.

It begins, commonly, from fifty to sixty days after infections
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Guntz noticed only one case where it set in before the fortieth day. In exceptional cases it may be deferred until the ninetieth day. As in the exanthemata, the fever may occur without any eruption, and constitutes the *chief symptom* of the blood poisoning. In some cases the eruption of secondary syphilis is said to have appeared without any fever whatever.

The fever is remittent in character, and the remission usually takes place in the morning, the exacerbation at night; but in the cases appended the morning temperature was, for a good while, the highest. During the remission the temperature may fall to normal, and sometimes the temperature during the exacerbation rises to 103° , 104° , F., and even higher. The degree of thermometric elevation, in a great measure, indicates the intensity of the blood poisoning. It is an interesting fact that mercury, in most instances, quickly abates the fever. When the syphilitic symptoms disappear, the fever falls, and the temperature becomes normal; but defervesence is usually gradual, as in typhoid fever. When relapses occur, the fever returns also. The following case illustrates the course of this fever, and at the same time presents a peculiar feature, which has already been alluded to:

L. F., German, single, age, 22, a gardener. About the end of August, 1875, he contracted a venereal ulcer on the upper portion of the prepuce, in the median line.

On the 21st of December, 1875, he was admitted to the Louisville City Hospital. At that time the primary sore had entirely healed, but the chain of lymphatic glands in each groin was much enlarged; the glands in the right groin were larger than those in the left. All these glands continued to gradually increase in size until they had attained a formidable magnitude. Sloughing then took place. Shortly after the patient's admission a slight roseolar eruption was observed, and probably would have become much more pronounced and lasting, had not mercury been administered. At the same time with the eruption,

and even before, there was a notable rise in temperature. The fever at its maximum reached 103° F. It was remittent in type. During the first two weeks the remission occurred in the morning, and the temperature was always highest in the latest part of the day, but afterwards the exacerbation was prone to occur in the morning, and the remission took place at night. This continued until defervescence was complete, that is, fully five weeks after a thermometric rise had been observed. The eruption had faded long ere the fever disappeared.

In preparing this paper the writer has been desirous of bringing together, in easily accessible form, knowledge which he believes to be not only useful but important. Although the pages are not burthened by numerous references, it is proper to say, that no statement of fact is made throughout the paper unless based on his own personal observation or on the works of standard authorities.

Proceedings of Societies.

ABSTRACT OF THE PROCEEDINGS OF THE MICHIGAN STATE BOARD OF HEALTH AT THE REGULAR MEETING, OCTOBER 10th, 1876.

The members present were Dr. H. O. Hitchcock, President, Dr. R. C. Kedzie, Dr. A. Hazlewood, Rev. C. H. Brigham and Henry B. Baker, Secretary.

Dr Kedzie presented two drawings, illustrating his paper on "Ventilation of Railroad Cars" ordered published in the annual report.

A paper on the "Water Supply in Michigan" was presented by Dr. Kedzie. The paper treated of the geological formation of the state as affecting the water supply, the mechanical and chemical effects of the different kinds of soil upon the water fil-

tered through them, of the impurities usually found in water supplies, of graveyards and other sources from which these impurities frequently arise, and of methods of improving the quality of waters now used. It stated that the only *sure* way to detect impurities in water is by a careful chemical analysis; yet there are tests which can be applied by any one which give strong *probable* evidence, such as smell before and during boiling, taste, and especially Heisch's test, which consists in the addition of half a teaspoonful of pure sugar to a pint of the water in a bottle partly filled, set in a warm, well lighted place for forty-eight hours. The presence of cloudy matter indicates impurities. The paper is to be published in the annual report.

Dr. Baker presented additional material for a paper on the "Death rate as Influenced by Age, Climate, etc.,," consisting of tables, charts, maps, diagrams, etc., and mentioned that he had found a way by which a comparison of the death rates of different states could be made without the necessity of computing a life table for each locality.

Dr. Hitchcock read a paper on "Criminal Abortion," showing that the present laws in this state have been derived from views held in past ages, and are not in conformity with our present knowledge of physiology. The paper will be published in the report.

Dr. Hazlewood read a paper upon "Water," based largely upon the replies of correspondents to a circular sent out by the Board. He stated the chemical composition of water, the impurities usually found, the amount needed by each person daily for all purposes, which he placed at 100 gallons, at least, the healthfulness of different kinds of water, the source of the water supply of this state, the way to obtain the best cistern water, and the danger of using water which had been in contact with lead pipe. The paper will be published in the report.

Dr. Baker read a paper on the "Cause of Chorea," reviewing the evidence lately published by Dr. Geo. T. Stevens of Albany, N. Y. and some other not heretofore published. Dr. Hazlewood made a report relative to the sanitary condition of

the State Public School, advising postponement of further examination, until after some proposed improvements at the institution have been finished.

Dr. Hitchcock reported the proceedings of the International Medical Congress at Philadelphia, Sept. 4, which he attended as a member, and for the purpose of securing whatever might promise to be of use in his labors in this Board for Public Health in Michigan.

Dr. Baker reported the proceedings of the Health Department of the American Social Science Association, at Saratoga Sept. 8. He gave abstracts of each of the papers read, most of which related to the improvement of the sanitary condition of schools and school children.

Dr. Baker also read a report on "Methods of Collecting Vital Statistics," in which he urged an amendment to the present law, which he held would increase the value of the statistics, and not materially increase the cost of collection.

A proposed circular of instruction relative to the "Restriction and Prevention of Scarlet Fever" was discussed at length, and is to be revised and issued for the benefit of public health in Michigan.

A circular to correspondents, asking for statements of cases, and of facts concerning Scarlet Fever, was also discussed, and is to be issued when perfected.

A communication from J. H. Beech M. D. was read, giving the details of the drowning of nine persons at Bawbeese lake, and containing suggestions for the prevention of similar occurrences. It was received with thanks. Dr. Beech also reported the unusual prevalence of diphtheria at Union City, and suggested that it afforded an opportunity for studying its causes.

Dr. Baker made a report in reference to the duties assigned him, and of a portion to the work done in the office since the last meeting.

The annual report of property, expenditures, etc., was also made; the time having been changed from April to October.

This report covers a period of six months only. The following are the items:

Chemical Analyses.....	\$10 00
Engraving, Drawing, Etc.....	125 00
Expenses of Members, Attending Meetings.....	52 75
do Other Official	58 05
Instruments and Books.....	14 90
Paper, Stationery, Etc.....	12 90
Postage, Office.....	177 55
do Members.....	4 00
Printing and Binding.....	46 45
Secretary.....	1000 00
Express.....	29 45
Otherwise.....	20 17
Total	\$1551 22

The property on hand consists of stationery, meteorological, and other instruments, and more particularly the library, which is continually increasing in value.

The replies of correspondents relative to prevailing diseases in Michigan in 1875, and also some results of the weekly reports of prevailing diseases up to September 30, are to be published in the annual report.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

CURES FOR THE OPIUM HABIT.

The well-known operators in these secret engines for the slow torture of the most unfortunate are finding victims "in the state of Maine." In the Boston Medical and Surgical Journal, for Oct. 26, 1876, is a report from a special committee of the Cumberland County (Maine) Medical Society giving an analysis, made by Waltz and Stillwell, Chemists, New York, of an "opium anti-

dote" issued by Mrs. J. A. Drollingher of La Porte, Ind. It consisted of morphia sulphate in solution of glycerine colored with aniline, about seven grains to the ounce. The committee had also obtained an analysis by Prof. H. Carmichael, Portland, Me., of the "antidote" of S. B. Collins, of La Porte, Ind. This was found to contain morphia sulphate, fourteen grains to the ounce.

These reports are presented with the remark that "there is a great opportunity for our brethren in the region of La Porte to distinguish themselves", so it is remarked, "to distinguish themselves as guardians of the health of the people, and we trust that they will not be slow to follow up the track so well opened by their fellows in Maine." Very true; if the County Medical Societies in Indiana, will follow up these things and take hold of them—take hold of them with the dressing forceps, etc., or anyway—we will all join in applause.

Numerous "opium antidotes" have been shown to consist essentially of morphia (1), and it does not require the testimony, which we have, to assure us that in the great majority of cases, those using these nostrums have no advantage of any sort from them. But it is not quite safe to assert the impossibility of cure by these articles, because, as we remarked in a former article,(2) they are given so as to afford a singularly favorable opportunity for a gradual diminution of the dose, the patient having just a month's supply, at stated doses, and being warned against increasing the dose of the unknown remedy. Further, it is not without interest that *quinine* is sometimes put with morphine, in these "cures." The article reported on page 195 of the present volume, contained a relatively (though not a therapeutically) larger proportion of quinine than of morphine. Only one instance of benefit has been communicated to us on good evidence—a case in which, after using the "antidote" two years, the patient discontinued it, without craving opiates.

(1) Beck's Cure (Flavored Tincture of Opium): WAYNE, *Cin. Lancet & Observer*, 1873. Squire's Cure; S. B. Collins' Cure; a Cure of unknown origin: THIS JOURNAL, April, 1874. An Antidote containing morphia with quinia: THIS JOURNAL, March, 1876 p. 195.

(2) THIS JOURNAL, 1874, p. 158.

EXAMINATION OF "PAIN KILLERS." BY JOSEPH J. PIERRON,
Ph. C.*

1. *Perry Davis' Pain Killer.* In a bottle sold for a dollar :
Spirit of Camphor, about two fluid ounces ;
Tincture of Capsicum, about one fluid ounce ;
Guaiac, one-half ounce ;
Myrrh, Color ; and three fluid ounces of Alcohol.
2. *Radway's Ready Relief.* In a half dollar bottle ;
Soap Liniment, about one-and-a-half fluid ounces ;
Tincture of Capsicum, one-half fluid ounce ;
Water of Ammonia, one-half fluid ounce ;
Alcohol, one-half fluid ounce.
3. *Flagg's Relief.* In a bottle sold for half a dollar ;
Oil of Cloves, about one fluid drachm ;
Oil of Sassafras, two fluid drachms :
Spirit of Campor, one-and-a-half fluid ounces.
4. *Chamberlain's Relief.* In a bottle sold for thirty-five cents, (approximately):
Tincture of Capsicum, one fluid ounce ;
Spirit of Camphor, three-fourths fluid ounce ;
Guaiac, one-fourth ounce ; and color tincture, to make two fluid ounces.
5. *Hamlin's Wizard Oil.* In a bottle sold for a dollar there are (in approximate proportion):
Spirit of Camphor, one fluid ounce ;
Spirit of Ammonia, one-half fluid ounce ;
Oil of Sassafras, one-half fluid ounce ;
Oil of Cloves, two fluid drachms ;
Chloroform, one-half fluid ounce ;
Oil of turpentine, one-half fluid ounce ;
Alcohol, to make about five fluid ounces.
6. *Kellogg's Red Drops.* A bottle, sold for half a dollar, contains, (in approximate quantities) :

Spirit of Camphor, two fluid ounces ;
Spirit of Origanum, one-fourth fluid ounce ;
Oil of Sassafras, one-fourth fluid ounce ;
Oil of turpentine, one-half fluid ounce ; and color tincture,
to make about three-and a-fourth fluid ounces .

Selections and Translations.

ON THE LOCAL USE OF COLD IN ABDOMINAL INFLAMMATIONS. By PETER EADE, M D., London, F. R. C. P., Physician to the Norfolk and Norwich Hospital.

There are few acute diseases with which we have to deal that cause us more anxiety during their continuance than the inflammatory affections of the abdomen. Though by no means common, they are frequently acute, and sudden in their onset ; and their course, whether for weal or woe, is often short, sharp, and decisive. It is with this class of abdominal affections exclusively that I wish now to deal, and the few observations I desire to make will have reference only to these. They comprise peritonitis, enteritis, and the congestive inflammatory condition which follows upon obstruction of the bowels, especially under the use of purgatives. Of the milder forms of peritonitis, such as the strumous and the tubercular, or the adhesive form, which is generally local, and is due to the neighborhood of some diseased viscus, I shall not now speak. I have no experience to bring before you of the local use of cold in their treatment, and therefore, although it may occasionally be useful in such conditions, my present observations do not apply to these.

The title of this paper is, "The Local Use of Cold in Abdominal Inflammations ;" and I venture to bring the subject before you in connection with some cases in which I have recently made use of this agent, with a very considerable amount of benefit to the respective patients. Of course I am well aware that

such a use of cold is not only not new, but has been recommended with a varying degree of emphasis by various writers. But whatever the recommendations of our text-books, this I do say, that a consulting experience of now many years tells me that the almost universal practice of this district in this case of peritonitis or enteritis is to apply warm rather than cold applications to the abdomen ; and that if I am called to see a case of either of these diseases, it almost (if not quite) never happens that the influence of cold locally to the abdomen has been brought into practical requisition.

I wish it to be distinctly understood that I am not now advocating the substitution of cold for warm applications to the abdomen in every case of inflammation—I have not sufficient data to go upon to justify this ; but I do desire to call, or perhaps I ought to say recall, the attention of this Society to the practical value, at least in some cases, of such practice ; and the cases which I now briefly relate to you from my clinical experience will, I trust, suffice to induce a trial by you of this rather neglected agent in apparently suitable circumstances.

Before doing so, I will, as shortly as possible, place before you the present views of authors as to the proper treatment of these inflammatory abdominal affections ; and, to save time, will only quote from three or four of those most commonly accepted as guides of the profession at the present time.

To begin with Sir Thomas Watson, whose well-weighed words always command attention and deference. Speaking of simple acute peritonitis, he says the great remedies are rest, blood-letting, and opium. He adds—" After the leeches have fallen off, a light poultice may be laid over the abdomen ; or it may be assiduously fomented with flannels wrung out of hot water, . . . and these are generally found to afford great comfort to the feeling of the patient. *Cold* applications have been recommended by some practitioners of high authority," as, for example, Dr. Sutton and Dr. Abercrombie ; but he goes on to say, " I should think this a more precarious plan than the opposite, and I have always observed so much relief to be given by warm epithems

that I have never had the inclination nor the courage to employ cold."

Of inflammation of the bowels he says that it requires very much the same kind of treatment as peritonitis.

Dr. Wardell, writing in Dr. Russell Reynolds's "System of Medicine," article Peritonitis, after quoting Sutton, Abercrombie, and Smoler of Prague, as having recommended cold compresses to the abdomen, and even injections of iced water, says: "Not having any personal experience of cold appliances, I shall not do more than mention a remedy to the success or otherwise of which I can bear no testimony. It would, to myself at least, seem of doubtful utility in many cases, and one involving great risk in others; and I prefer what I believe to be equally efficacious, and certainly safer—namely, "warm fomentations."

Dr. Bristowe (article Enteritis, "Reynolds's System"), also recommends, after the application of leeches, "warm but light applications to the surface of the belly," which he says, "generally soothe, even if they produce no further beneficial effect." And of the vomiting which ensues when the stomach and bowels become greatly distended, he says, if to this "over distension there is no other channel of relief, medicine ceases to have any power over it."

Dr. Tanner advises for peritonitis "sedative fomentations to be properly and assiduously applied," either alone, or the abdomen having been previously covered with extracts of poppy and belladonna. He does not allude to the use of cold in the treatment of either peritonitis or enteritis.

Dr. Aitken says leech, give opium, and apply warm fomentations, in peritonitis; and he recommends pretty much the same treatment in enteritis.

Dr. Copland says, if cold is applied to the abdomen at all, it should be in the early stage and in the acute form of peritonitis; but he prefers the external use of turpentine, and of fomentations.

Niemeyer speaks favorably of local blood-letting in peritonitis, and then says: "The employment of cold acts in the same way,

and perhaps it has even more effect on the inflammation itself. If the patient can bear it—which, unfortunately, is not always the case—we may cover the entire abdomen with cold compresses, and renew them every ten minutes." And lastly,

Dr. Flint, of New York, says: "Warm fomentations to the abdomen, if grateful to the patient, are useful. . . . Cold applications are recommended, after trial, by Grisolle and Alison. I cannot speak of their utility from observation, but I should be willing to trust to the feelings of the patient in deciding between warm and cold applications."

From these quotations it will be seen that though the local use of cold is mentioned by the majority of modern authors, yet that, practically it has been ignored or rejected by them in favor of warm fomentations or poultices. That these latter often fail to give any marked or sufficient relief must be in the experience of all of us. That the use of cold instead of warmth, locally, will sometimes give marked relief, the following cases, which have all occurred to me within the last two years, will, I think, show:

CASE I.—Mr. A—, suffering from enteritis of four days' duration, apparently due to an excessive meal of white sprats. The symptoms were abdominal pain and commencing distension, frequent sickness, and high pulse and temperature. Ice in bladders was ordered to be applied to the abdomen as was found agreeable. Perfect rest of body was strongly enjoined, abstinence from much nutriment recommended, and the opium pills he was taking advised to be continued. He at once experienced relief; of his own accord re-applied the ice-bladders from time to time; in two days was greatly relieved; and from that time convalesced.

CASE II.—Mrs. B—, suffering from severe and acute peritonitis of four days standing, attributed to cold. She had been freely leeched, with relief to the pain; but the abdomen was much distended, the sickness was urgent, she was thirsty, and much flushed, the pulse was 130, and the temperature 102°. Here, again, the ice-bags were freely applied to the abdomen, whilst opium was continued at short intervals. She liked the

effect of the cold so well that she voluntarily continued its use ; and soon her symptoms began to improve, and she eventually got quite well.

CASE III.—Miss C—, suffering from acute abdominal congestion due to obstruction of the bowels of many days standing. Here the abdominal distension was great, the sickness frequent, and the tenderness considerable. In addition to opium at intervals, ice-bags were now substituted for warm poultices, and the relief given by them was very decided. They were continued for many days at intervals, and under their use the sickness and abdominal distension markedly subsided. The patient was ultimately relieved by operation ; but there could be no doubt of the palliative efficacy of the cold.

CASE IV.—Mr D—, suffering also from obstruction of the bowels. The symptoms were pain, sickness, constipation, and paroxysmal tortuous convulsions of the bowels. Ice was freely applied in the same manner as before, and the relief was marked and continuous. This patient eventually recovered from the obstruction, and the bowels acted again.

These cases are, I think, sufficient to show that, in the local use of cold in abdominal inflammation, we have a remedy of great value in certain cases; and that, though of course, it is not applicable to all, and probably requires to be used tentatively in the great majority, yet that it is, when properly applied, both safe and reliable, and by no means to be regarded as precarious or as requiring “courage” for its application.

The forms of abdominal inflammation or congestion to which it is most suited are doubtless the more sthenic ones, in their early or middle stages, before collapse begins to show itself, and where accompanying circumstances are not of a depressing nature. But it has seemed to me that the patient is generally the best judge of its suitability, and that it may safely be left to his or her feelings to decide as to the propriety of its continuance. In some cases the influence exerted is certainly most grateful to the feelings.

Niemeyer and others advise that cold should be applied to

the abdomen by means of cold water compresses or cloths wetted in iced water. The plan of applying the cold by means of one or two bladders half filled with broken ice, which can be shifted from place to place, has seemed to me to be more satisfactory. I have usually directed that they should be removed as soon as they cease to be agreeable, generally in twenty or thirty minutes, and reapplied after an interval of an hour or so. I wish to say that the first case in which I saw the cold so applied was one in which its local use was advised by Sir W. Gull, and from him I derived my knowledge of this mode of its application. The injection of iced water into the rectum has been suggested, but of this I have no experience.

The *modus operandi* is, no doubt, to abstract heat, to benumb exalted sensibility, and to contract the dilated and semi-paralyzed vessels. And its especial effects have seemed to be, to diminish abdominal distension, to control the volvulous writhings of the bowels, and thereby to relieve both pain and tenderness.

I can only add that very recent experience leads me to think that we have of late unduly neglected a valuable therapeutical agent, and I have therefore ventured to bring the subject before the notice of our Society to-day.—*London Lancet.*

PHOSPHORUS IN NERVOUS DISEASES. By E. LEMAIRE.

After having devoted some pages to the history and physiological action of this drug, as well as to the pharmacology of the same, the author explains its principal therapeutical applications based upon 73 cases.

I. In paralysis subsequent upon acute diseases, and ataxoadynamic fevers, as well as hysterical paralysis and that from exposure to cold, phosphorus possesses no special action. The same may be said of paralysis the result of cerebral softening or a cerebral haemorrhage of a certain extent. But in a paralysis following a haemorrhage of limited extent, and which has not produced too much disturbance in the nervous system, phosphorus seems to assist and hasten the cure, even when the

palsy has lasted for a considerable time, say, for example, a year. But that the drug may exhibit its full action, it is necessary that all congestive and inflammatory symptoms shall have disappeared. Then we must begin with a dose of $\frac{1}{100}$ grain and gradually increase to a larger quantity, never going beyond $\frac{1}{2}$ or $\frac{1}{10}$ of a grain.

In spinal paralysis, phosphorus is quite inert if the paraplegia be of very long standing and if it be connected with softening or advanced sclerosis of the cord.

II. In locomotor ataxia, the administration of phosphorus is sometimes followed by good results, inasmuch as it strengthens the patient, diminishes the inco-ordination of the movements, and seems to arrest the progress of the disease and keep it in a stationary condition for perhaps a long period.

It does not appear to have any beneficial action upon the lightning-like pains or upon the ocular disturbances of this disease; and it exerts a very varying influence upon the genito-urinary organs, since it sometimes excites sexual desires, and at times has no effect of that kind at all.

Want of success of the phosphorus treatment seems to depend upon several circumstances : 1st. Duration of the complaint. 2nd. The existence of symptoms of congestion of the spinal centers or of an excessive irritability of the nervous system. 3d. The existence of gastro-intestinal troubles, diarrhoea or vomiting, in which cases phosphorus is contra-indicated.

III. Phosphorus has been employed in lead and mercury-poisoning, and in poisoning by the fumes of carbon sulphide. In lead-poisoning it produces no effect, but in the two last it is often followed by very marked improvement.

IV. In paralysis of some of the ocular muscles, in incomplete amaurosis, in amblyopia not symptomatic of organic disease of the retina, in anaphrodisia, the results obtained are uncertain.

The author repeats that we must begin with a dose of $\frac{1}{100}$ gr. gradually increasing the dose to $\frac{1}{2}$ or $\frac{1}{10}$ grain which should be given in two separate portions, and during meal-time, because when fasting it gives rise to eructations of phosphorus odor

and is also more irritating. Besides, as this is a drug which is cumulative in the system, the treatment must be suspended at the end of ten or twelve days, to be recommenced some day subsequently.—*Revue des Sciences Médicales*, 15 Jan. 1876.

LACTIC ACID AS A HYPNOTIC.

The London *Medical Record* states that at a meeting of the Berlin Medical Society, Dr. E. Mendel read a paper on this subject. Referring to the observations of Preyer and Luther Meyer on the hypnotic properties of Lactic acid, he said that its effects when administered by the mouth, either pure or in the form of lactate of soda, were uncertain, but he had found very good results from its use in enema in a large number of cases. The dose of lactic acid was from five to twenty grammes (seventy-five to three hundred grains,) mixed with an equal quantity of lactate of soda. The use of lactic acid was especially recommended.

1. In the case of insomnia in the course of or during convalescence from debilitating disease, after hemorrhages, etc; 2. As a Calmative in excitement of the insane; 3. As a remedy in certain psychoses, in regard to which its precise indications must be determined in the future.

In commencing a discussion on Mendel's paper, Dr. Senator said that he had used lactic acid either in divided doses, ten grammes (one hundred and fifty five grains) being given in the course of the day, or in single doses of from five to ten grammes in sugared water or as a lemonade. With the first named mode of administration no weariness was observed. On the other hand, a large single dose produced pure weariness: although lactic acid could not be compared, as regarded strength or duration of action, with morphia or with chloral hydrate. There was however, a troublesome after-effect which had not been noticed by Mendel nor Luther Meyer, the occurrence of rheumatic pains; these he had observed twice, once in a phthisical patient, the other time in a man who had frequent attacks of muscular rheumatism. Rheumatic pains had also been absorbed in giving

lactic acid with other objects, such as the treatment of diabetes, &c. The occurrence of rheumatic pains after the administration of lactic acid was of importance with regard to the theory of articular rheumatism, and he asked whether Mendel or Meyer had observed anything of the kind, Mendel answered in the negative. The doses used by Senator were too small; at least fifteen grammes should be given. He agreed with Senator that lactic acid was inferior to morphia and chloral hydrate.—*Medical and Surgical Reporter.*

PAINLESS APPLICATION OF THE ACTUAL CAUTERY.

The surgeon is often deterred from using the actual cautery by the pain it produces. This pain may be avoided by the application of carbolic acid. This local anæsthetic is not used with near the frequency which its efficacy deserves.

Pure carbolic acid should be applied to the parts to be cauterized which are then covered with a light compress; after a short time, before the anæsthetic effect has passed off, apply the cautery. There will be a complete absence of pain. It is immaterial whether the acid be liquid or crystallized; in the former case it is to be applied with a brush; in the latter it extends over the parts as it liquifies.—(*Gazz. Med. Ital. Venete.*—*N. Y. Medical Journal.*)

HOW TO CURE A COLD IN THE HEAD.

The following formula has the authority of Dr. Ferrier as being a snuff which may be used to good advantage in acute catarrh of the nasal mucous membrane:

R

Hydro Chlorate of Morphia, grs. ij.

Acacia Powder, 3ij.

Trisnitrate of Bismuth, 3vj.

The inhalations should be commenced as soon as the symptoms of coryza show themselves and should be used frequently at first so as to keep the surface constantly coated. It may be taken from between the finger and thumb in the ordinary manner or from a "snuff spoon" placing it just within the nostril and sniffing up forcibly so as to carry it well within.

PUERPERAL ECLAMPSIA.

Dr. O. B. Withers, Ky., in a paper read before the Southwestern Kentucky Medical Association, states that "out of thirty-four cases [of puerperal eclampsia] that have come under my observation, there has been only one death, and that was before labor came on." He reports several cases, and thinks the uterus should be relieved, with or without instruments, with as little delay as practicable. "Do not delay, for you may possibly save both mother and child. But if there is turgescence, or even hardness of the pulse, bleed; no remedy is equal to opening the temporal artery; do not neglect it on any account. Fear not the censure of anybody, but be bold, energetic and prompt, for the woman's life is in your hands." Delivery and bleeding are his great points—cathartics and other usual remedies are good adjuvants.—*Richmond and Louisville Med. Jour.*

CARBOLIC ACID AND CANADA BALSAM IN SYCOSIS.

Dr. G. A. Stark, of Milwaukee, reports in the *Canada Medical and Surgical Journal* a case of sycosis treated successfully with a combination of equal parts of carbolic acid and Canada balsam after the ordinary applications had failed. The mixture applied by means of a camel's hair pencil. "The acid, especially after epilation, enters the pustules, and thus strikes at the very root of the disease. The contents of the pustules are almost instantly converted into a white crisp, and I have no

doubt it destroys the defending parasite. The balsam forms a varnish over the parts to which it is applied and thus diminishes irritation. The irritation caused by the application only lasts a short time and is followed by relief. The irritation is not to be compared to that caused by the application of iodide of sulphur ointment, &c. The patient's appearance is much improved, the parts looking somewhat paler than natural, instead of being studded with pustules, or covered with filthy-looking scabs. If applied thoroughly, once in three or four days, or in some cases a week would be soon enough to renew the applications. If necessary, it may be applied every day. It may also be used in different proportions as to the proportion of acid in the combination, as deemed most suitable in each particular case. I have found this preparation satisfactory in other forms of disease of the skin, as ring-worm, &c. It is worthy of trial in any form of disease of the skin which is thought to be of parasitic origin. I have accomplished more with this combination, prepared in suitable proportions respectively of the acid and balsam to suit individual cases, and in a much shorter time, as an external application in many forms of cutaneous affection, than with all other local applications combined. I have also found it to act well in some cases of burns and scalds."

DRESSING FOR BURNS.

Mix subtrirate of bismuth with pure honey until it forms a thick paste, spread the mixture plentifully over the burned surface and parts near adjoining, as soon as possible after the burn occurs. Then cover the parts thickly with cotton wool batting and bind closely. In the majority of cases, the dressing should not be removed for three or four days, when the parts should be immersed in water until the dressing is very soft and easily removed. The same dressing should be immediately renewed.—*Pacific Medical and Surgical Journal.*

*A CAUSE OF THE FREQUENT FAILURE OF PHOSPHORUS
AS A THERAPEUTIC AGENT.* By PROF. H. D. GARRISON,
M. D.

Since the discovery that phosphorus is a constant and prominent element in the composition of nerve tissue, and certain brain oils and fats, as shown by Von Bibra & Fremy, and especially since the correlation of mental activity and the excretion of phosphates was pointed out by Liebig, physicians have been on the alert to find some means by which, in certain diseases, they might increase the percentage of this element in the nervous structures, hoping thereby to increase mental activity in some cases and in others to subdue pain, on the hypothesis that pain is the cry of the nerves for food. While such vigilance on the part of physicians is always commendable, the theories by which they have been guided in this matter have been, in numerous instances, highly absurd and ridiculous.

It is, indeed, a deplorable fact, that most physicians of all schools of practice, however highly educated in other respects, are so poorly informed as to the principles of chemistry that they can perceive no essential difference between a mere admixture of substances and a chemical combination of the same. Entertaining such vague notions as to the nature of compounds, it is not strange that when, in their opinion, phosphorus has been indicated, one of its compounds, as phosphoric acid or a hypophosphite, has been given, the prescriber innocently hoping and supposing that the mysterious energies of life would in some way analyze the compound and turn over to the nervous system its phosphorus for assimilation.

When we reflect that the blood is a powerful oxidizing liquid—a furnace in which organic compounds are rapidly destroyed, and in which all oxidizable elements and compounds are raised to their highest degree of oxidation, we

can perceive how impossible it is that phosphorus, in combination with oxygen, as in the phosphates, hypophosphites, phosphoric acid, etc., should in this liquid be deoxidized. Indeed, to separate phosphorus from oxygen, the full force of a white heat, aided by the affinity between carbon and oxygen at the same temperature, is necessary.

The animal economy has no reduction works in any way comparable to the above, therefore, phosphorus combined with oxygen can never be divorced from that element in the animal organism. On the contrary, such phosphorus compounds as the phosphates and hypophosphites, which admit of further oxidation, always become fully oxidized (phosphates) while passing through the organism.

From these considerations it follows that the administration of a phosphate, hypophosphite, or phosphoric acid, with the view of obtaining the special action of the phosphorus contained in those compounds, is just as absurd as the exhibition of water or carbonic acid for the oxygen therein contained.

Whatever nervous energy may be derived from phosphorus can only come from its oxidation in the nervous tissues, just as heat is evolved by its rapid oxidation (combustion) in the air, or as electricity is produced by chemical combinations in galvanic batteries. As phosphoric acid and phosphates are, as it were, the ashes of burnt phosphorus, they cannot be further oxidized, and are therefore as useless in this respect as is the sulphate of zinc in a galvanic battery.

In what condition or form, then, must phosphorus be given to avoid the foregoing objections, and to render its assimilation at least possible? We answer that the pure element must be given in solution in oil, sulphur, ether, alcohol, or, better yet, in the form of sugar-coated pills. Solutions of phosphorus are all objectionable because of

their bad (match-like) odor and taste, and their indefiniteness and instability. All liquids purporting to contain the element as such, which do not possess this smell and taste, are evidently frauds, of which the number is already large. Well-made phosphorus pills, coated with sugar or gelatine, are as nearly free from objections of every kind as it is possible to make any preparation of this element. In thus speaking of "well-made" pills, we do not wish to be regarded as endorsing many of the brands afloat upon the drug market, because in many cases these are about as badly made as it is possible to make them.

Some apothecaries, wishing to possess good phosphorus pills at prime cost, have attempted to powder the phosphorus in a mortar, preparatory to its incorporation in the pill mass. Several drug merchants (perhaps we should not call them either apothecaries or pharmacists) have burnt their fingers by this species of foolishness. An emulsion of phosphorus, easily made by shaking the element in hot syrup of gum arabic, gives us a ready means of evenly incorporating this substance in almost any pill mass. The pill mass must not, however, be of such a nature that when dry it will be pervious to the air, else the phosphorus will soon all be converted into phosphoric acid. On this rock many manufacturers have wrecked their ship of fame. On opening their so-called "phosphorus pills" in the market, not even a smell of phosphorus is vouchsafed the investigator, an incident suggesting the play of Hamlet with Hamlet omitted. The total absence of phosphorus in such pills is not evidence of fraud, but of ignorance on the part of the makers, who no doubt spoiled a proper quantity of phosphorus at each operation. Had these men acquired wisdom by the study of a match, which retains its phosphorus for years, even in the presence of bodies rich in oxygen, they

would have used more gum arabic and perhaps less solid extracts, flour, etc., as excipients, and would have spared themselves and phosphorus much ill repute.

It is easy to understand how phosphorus, slowly liberated by the solution of its gum environment in the stomach, may dissolve in the oily matter always present in that organ, and when thus dissolved gain direct access to the circulation, where its covering of oil would for a short time protect it from destruction by oxidation and thus permit it to enter the nerve tissues. Phosphorus pills of the strength of one-fiftieth grain each are by no means so irritating and poisonous as one might infer from the amount of the substance contained in them. We have known one case in which a patient, against directions, took six of such pills three times per day for two or three days without experiencing the slightest inconvenience.—*The Pharmacist.*

BONWILL'S METHOD OF ANÆSTHESIA IN DISEASES OF THE EYE.

It is a well known fact that in ophthalmology there are many little operations of a painful nature that occur almost daily in hospital as well as in private practice, which are really too quickly performed to require the use of an anæsthetic, but which in many cases, from the great pain and sensitiveness of the patient, cannot be made without it; and in many, if not the majority of cases, there is such an after-sickness and depression from the use of ether or chloroform that it seems very hard that one should suffer so long with this dreadful nausea for a little affair that could be accomplished in a few seconds without any after suffering, if the patient could only hold still for a moment.

How grateful, therefore, should we feel for the suggestion of anything to take the place of ether or chloroform in

dulling sensation in cases of small operations, where complete anaesthesia is hardly necessary.

Some considerable time ago, my friend Dr. W. G. A. Bonwill, of this city, related to me his experience with the use of air as an anaesthetic in dental operations, and asked me to try it in my practice ; since which time I have tried it with very happy results on many occasions. My experience with it has been, however, entirely in small or rather short but painful operations, as its anaesthetic action is not long enough for larger or more tedious manipulations.

Foreign bodies in the eye are of very frequent occurrence, and in children and nervous people, who will not remain quiet, very difficult of removal. In such cases I have found that by getting the patient to make deep and quick inspirations of the ordinary air of the room for a few seconds to a minute or so, the eye can be opened without difficulty, and the foreign body removed from the cornea or under the lid, with ease, and without the least pain or inconvenience to the patient.

In cases of painful hordeolum, which require to be opened, it affords a most happy assistance.

In slitting up a canaliculus, as well as in the introduction of Bowman's probes, it is equally efficient.

It is to my mind one of the simplest and at the same time one of the most beneficial agents in small operations about the eye that has been presented to the profession ; its application being very easy, requiring no recumbent position on the part of the patient, calling for no apparatus for its administration, and being perfectly free from any of the disagreeable effects of ether and chloroform.

To produce the proper effect the patient must open his mouth, breath freely, quickly and deeply, and after a few seconds or minutes of such steady and continuous breath-

ing, the symptoms of partial anæsthesia supervene, as is evinced by the absence of feeling in pinching or pricking with a pin. At this stage any operation should be made. The anæsthetic feeling passes almost immediately away, and the patient feels no pain in the operation if done dexterously and without hesitation.

From my experience I take pleasure in recommending its use very highly, not only to ophthalmologists, but also to the general surgeon, where minor operations are to be performed.

Any one interested in the subject I would refer to an article by Bonwill on "Air as an Anæsthetic," in the *Pennsylvania Journal of Dental Science*.—P. D. KEYSER, M. D.—*Philadelphia Medical Times*.

LACTIC ACID, ITS USES AND ITS PREPARATION.

Lactic acid was recommended ten years ago in France, by Bricheau and Adrian, for inhalation in the atomized state in order to dissolve croup-membranes of the larynx, so that they might be moved by coughing. The use of such inhalations after tracheotomy in croup by continental surgeons is said to have been attended with very favorable results. French observers have found that the false membranes were quickest dissolved in a solution of lactic acid, less quickly in lime-water, and even more slowly and incompletely in solutions of chlorate of potash or soda; other salts of alkali in solutions fit for use with the living subject proved entirely ineffectual.

Lately the pure acid or its soda salt has been made use of for internal application as a narcotic by German physicians, and it has been recommended for insomnia after hæmorrhage or exhausting disease, for quieting persons of anxious and diseased mind and in other mental derangements, though it acts less powerfully than opium. The most reliable mode of administration seems to be an

enema, and it is recommended to give from five to twenty grammes in a solution with about an equal weight of carbonate of soda. Dr. Foster, of Birmingham, who has used this acid in cases of diabetes mellitus, noticed acute inflammation of joints after large doses in two patients suffering from that disease.

The chemical preparation for pharmaceutical purposes is, of course, obtained by fermentation of lactic sugar solution, or may be formed by synthesis from aldehyd, hydrocyanic acid and hydrochloric acid. We take the following directions for its preparation from the well-known work of Professor Hoppe-Seyler, of Strasburg University: A solution of cane-sugar is to be mixed with sour milk and oxide of zinc, and exposed with frequent stirring for some time in a warm atmosphere. The crusts of lactate of zinc which form are to be dissolved in hot water, then filtered, and from the still hot solution the metal is to be precipitated by sulphuretted hydrogen. Filter again, evaporate over a water-bath, and shake the syrupy remnant with ether which will absorb the lactic acid. Upon distillation the latter is obtained in a pure state. It is the æthylid lactic acid (æthylidenmilchsaure). The paralactic acid which forms an important constituent of Liebig's Extract of Meat, has been found also in many pathological secretions, as, for instance, in the urine, after phosphorus-poisoning. The æthen lactic acid which has been found in meat extract and in pathological liquids, by Wislicenus (*Annalen der Chemisch. Pharmacie*, vols. clxvi., clxvii.), is always combined with the paralactic, and is separated from it by dissolving its zinc salt in alcohol and letting the paralactate of zinc crystallize, the salt then remaining in solution is æthylen lactate of zinc. The fourth lactic acid of the formula $C_2H_4(OH)CO_2H$, called hydracrylic acid, has been produced artificially only from betaiodic propionic acid.—*Boston Journal of Chemistry.*

CITY AND COUNTRY DOCTORS.

Dr. Stickney, of Springfield, thus contrasts city and country physicians :—

The contrasts and differences between a country and city practice lie principally in the sodality of the one and the isolation of the other. Each position, however, has its advantages and disadvantages; and in its own way fashions and develops those special influences which have so much to do in adapting the practitioner for his work.

In the city are found large opportunities for every kind of advancement. The social conditions, the literary associations, the public libraries, and other sources of improvement, furnish in cities a scope and variety of means which are not to be had elsewhere. So also the immediate opportunities of daily professional intercourse, out of which grow mutual reliance and assistance, the ready communication of newly-acquired knowledge and fresh experiences, and the benefits of professional observations possible only in the public charities of a city—all these contribute greatly to the common advantage and success of medical men in populous places.

On the other hand, the “country doctor” has comparatively few such advantages; for while his practice embraces the whole range of medical and surgical service, his opportunities for outside aid and improvement are meagre and limited. His resources are his self-reliant skill and faculty, his native good sense and good judgment, and what there is in him of heroic worth and virtue. With no ready chance for mutual consent, he stands alone; and he must of necessity be plucky, sharp of observation, cautious, yet with quick sense of apprehension. He must be capable of acting at once, of doing the right thing at the right time, and of doing it as perfectly as possible. A human life hangs in the balance, and with what of cour-

age, insight, and ability there is in him, he must wrestle alone with the danger. Circumstances and exigencies like these ripen his native qualities, and bring him occasions which test the temper of his mental fibre as well as his firmness and force of character.

Then again, this work, with all its demands and difficulties, comes under the immediate notice of every one. The country practitioner goes at once to the front, to be seen and known of all. His qualities as a man, his capability to perform successfully the duties of his calling, will be sharply criticised by all. The people among whom he dwells belong mostly to that great middle class which holds together the extremes of society ; intelligent people, capable of forming correct judgments. Before such judges stands the "country doctor," and there is no chance for hiding behind subterfuges, or for shirking responsibilities. No petty artifices will excuse blunders or stupidity ; sharp eyes follow him everywhere, constantly observing, and discerning "what manner of man he is."

Dr. Samuel Johnson, in his criticism on Dr. Akenside, the poet, says, "A physician in a great city seems to be the mere plaything of fortune ; his degree of reputation is for the most part totally casual. They that employ him know not his deficiencies." In the country the case is far different. There the analysis of character and ability is more complete ; for there that distinction is less which comes from position and wealth ; and every one, rich or poor, man or woman, counts at a full rate in the expression of opinions.

But an attractive feature of country practice grows out of the free yet respectful intercourse, which constitutes one of the main sources of pleasure and help of country life. Known by every one, if intelligent and educated, possessing a warm heart and generous sympathies, "the

country doctor" gains respect, esteem, and love. He in turn learns to know his people—even better than they know themselves. He knows them from birth; "knows what stock they are made of;" knows their constitution, their habits of life, their social and moral qualities, and their secrets, too; and, "king of health in his own regions," thus understands full well how to manage their physical ills deftly and safely. To them he is the friend, the comforter, and the adviser; and he becomes, what is growing rare in cities, the family doctor, in whom all confidences meet and rest, and in whom all hopes of human aid are centred in times of trial, sorrow, and impending dissolution.—*Boston Journal of Chemistry.*

IS ENTERIC FEVER SPONTANEOUSLY GENERATED.

In answer to this query, and acting on the advice given by Sir William Jenner, quoted by Dr. Fox in the *Journal* of March 25th, that "the best mode of settling this question is to thoroughly scrutinize every isolated case that occurs in out-of-the-way country places." I submit two groups of isolated cases which occurred in my out-of-the-way country district. The first group consisted of four cases, all occurring in the same house, about the same time. The house itself was a moderately large one for a cottager, consisting of four fair-sized rooms. The family consisted of four persons, three adults and a boy of four years. The situation of the house was most peculiar. It was built on a hill-side, facing the junction of four wide valleys; a more exposed situation could hardly be imagined. Above the house were miles of moorland; the house was some distance from any high road, and altogether so far out-of-the-way, that it was impossible that any tramp infected with enteric fever could have found out the house, far less the privy which turned out to be the

source of the mischief. The father of the family was the first victim ; within a week his wife was taken ill ; in another week the daughter ; and, finally, a married daughter, who had come to nurse them, also took the disease. All the four persons were ill at the same time ; the little boy escaped (not having used the privy). Two sons came to help nurse their relatives, and, by my advice, did not go near the privy ; also a trained nurse, who also took care of them. The father and the married daughter died. The other two recovered. The water-supply was examined and found pure ; the house was clean and commodious. The privy was found running over, and so full of filth that the seat could not be used. The fact that all the sufferers had used this privy, and that those who were afterwards exposed to the same conditions (with the exception of the foul privy), as well as the double danger of the typhoid stools from the four individuals, never took the disease—all this points to some local exciting cause, viz., the privy. In addition to this, when we consider the exposed situation of the house, its isolated position, to which a person (a tramp, for instance, who is the vehicle for carrying about the disease, according to the belief of some), suffering from enteric fever, could not have climbed, the road being both steep and difficult to find ; when we consider the pureness and abundance of the water-supply, and the entire absence of enteric fever from that district, which is very thinly populated ; combining these facts with the circumstance that neither the father nor any of the others had been out of the district for a very long time, nor had they any visitors, we were driven to the conclusion that the disease was generated *de novo*, and that there could have been no exposure to a specific contagion. I may state that the privy was disinfected and cleaned out, and, although a new family has occupied the house since the outbreak, no fresh cases have occurred.

The second group also consisted of four cases. Two little boys, attending a day school, had an attack of diarrhoea. One of the boys passed his evacuations in bed during the night, but was able to go to school next morning. The mother of the boys employed a charwoman to assist her in washing the soiled bedclothes. An aunt of the boys resident in the house also assisted. Within a week these three persons were seized with symptoms of enteric fever, which developed rapidly, and proved fatal to the mother and to the aunt. All three, when engaged in the cleaning of the soiled linen, were nauseated by the foul smell of the evacuations. The house was a fairly built one, and contained twelve inmates (six adults and six children). The drainage was perfect, the water-supply pure and constant. No cases of enteric fever existed in the district. None of the family had been from home ; they had no visitors. The privy was clean, and as wholesome as could be expected. The two boys attended school all the time they were ill (a few days) ; their appetite and general health were not affected. The school was airy and well ventilated ; none of the other scholars were ill. No source of contagion could be traced. Was the diarrhoea of the boys the manifestation of enteric fever in a mild form ? If so, then the infection of the three persons is at once accounted for ; but it is open to doubt if this diarrhoea was that of enteric fever, for in no way could any source of infection be found which would account for their having taken the disease. In the absence of any proof to the contrary, we must admit that the disease began from the inhalation of the foetid stools of the boys ; that the emanations from these stools poisoned the systems of the three individuals who inhaled them, and the "filth-fever" was thus generated. I have omitted to mention that one of the children, who remained in the sick room

with its mother during her long illness, also took the disease and died from it, the mother clearly infecting the child ; but none of the other children or other inmates of the house suffered from the disease. In conclusion, I may state that the privy in the garden of the house was quite inaccessible to any tramps, who might have left it in their infested stools, so that this theory, which meets many of the obscure cases, is not tenable in this instance.—D. R. B. LAW in *British Medical Journal*.

FLUID EXTRACT OF EUCALYPTUS GLOBULUS IN DROPSIES.

Dr. J. B. Leary, in the *Proceedings of the Medical Society of King's County* for September, says that nearly four years ago he prescribed eucalyptus as a specific in gonorrhœa. Then he noticed, also, its remarkable diuretic effect. He now reports the more remarkably successful use of ten-minim doses of the fluid extract in four cases of dropsy of long standing—the dropsy in one case being due to Bright's disease; in the second to cardiac hypertrophy by dilatation ; in the third to cardiac disease ; and in the forth to cardiac hypertrophy. The doses were never increased beyond ten minimis three or four times a day, but in some cases diminished to eight minimis—the system at no time tolerating it.

The Doctor adds that he has also given the medicine in a great many cases of passive congestion of the kidneys, and always with benefit. Patients while taking the drug would sometimes complain of a very severe congestive headache, accompanied with tinnitus aurium. The appetite was improved, and in some cases a laxative condition of the bowels was produced.

It should be remembered, in prescribing it that the drug

contains a resin which is precipitated by many other agents. Dr. Leary's most frequent combination was with digitalis.—*Virginia Medical Monthly.*

FORMULA FOR MIGRIANE.

M. Fort recommends the following :—Sulph. quin. gr. xv., pulv. bellad. gr. iv., ext. digital. gr. vijss., ext. valerian gr. xv., mel. q. s., ut f. pil. xx. Whatever may be the length of the interval which separates the paroxysms—whether a week, or month, or more—the patient should take the twenty pills, commencing four days before the expected recurrence of the paroxysm, when he will take one in the morning fasting, and one at bed-time ; next day he takes three—two in the morning, and one at night ; the day after that he takes six—three in the morning, and three at night ; on the day before the paroxysm is expected he will take nine—four in the morning and five in the evening. If the expected paroxysm be not in this way prevented, it will, at all events, be mitigated, and the patient will recommence his course of pills four days before its expected successor.—*Med. Times and Gazette.*

VACCINATION.

In referring to one death and several cases of severe erysipelas disease which resulted apparently from vaccination with human lymph, recently in a German village the *Medical and Surgical Reporter* says : It would not take many such examples to confirm the prejudice which already exists too generally in the popular mind against vaccinating at all ; and this would bring disastrous results to public health. The real alternative is to use *bovine* virus only, that which is derived from healthy heifers, on whom the genuine vaccine disease has been produced. And to shun the *lymph tubes*, and the *crusta*, and employ only *quills* and *ivory points*. These are far surer, neater and more permanent than any other forms. These are supplanting all other forms of bovine virus.

Ars, ante omnia veritas.

Editorial.

OPIUM CURES.

The work which Prof. Prescott has done through our columns during the past year in "exposing the injuries sustained by the unwary from the devices and pretensions of artful empirics and impostors" by giving analyses of the nostrums which flood the market, is one which cannot be over-estimated. We are pleased to learn from a circular received that this work is being supplemented by other analytical chemists. At the August meeting of the Cumberland County (Maine) Medical Society, attention was called to certain alleged "Opium Antidotes" and a committee consisting of Drs. Gerish, French and Foster was appointed to obtain an analysis of the preparations. Two specimens, one manufactured by Mrs. J. A. Drollingher, of LaPorte, Indiana, and the other by Dr. S. B. Collins, "the great Narcologist of the age," also of LaPorte, were submitted to analysis, the first by Walz & Stillwell, of New York City, and the other by Dr. Henry Carmichael, Professor of Chemistry in Bowdoin College, and Assayer of the State of Maine. These analyses confirm those made under the direction of Prof. Prescott and prove the "cures" to be largely composed of opium or its alkaloids.

The evil of opium eating is very wide-spread and is apparently on the increase. It can never be eradicated by any means except that which can come only through legal enactment. The sale of the so-called cures, together with that of the drug itself, should be prohibited by law. As long as our druggists are permitted to sell opium over their counters to all comers, the habit of opium eating will increase and the trade in "cures" flourish. The circular, above referred to, calls upon us to publish the

analyses referred to, and to warn our readers and the public of the dangers which lurk in the specious announcements of the "great narcologists of the age." This we most gladly undertake, under the full consciousness, however, that the good which will follow will scarcely justify the pains, unless it arrests the attention of our legislators. Nothing but a clause in our statutes making it a misdemeanor to sell the drug except on the prescription of a reputable physician, will ever counteract the mischief.

We regret very much the necessity which compelled us to delay the issue of the November number until this date. The only apology we have to offer is the fact that the fault lies entirely with our printer, from whom we have the assurance that it will not happen again.

Reviews and Bibliographical Notes.

A MANUAL OF MIDWIFERY. By ALFRED MEADOWS, M. D., Lond., F. R. C. P. Fellow of King's College, London; Physician Accoucheur to St. Mary's Hospital, &c. Second American from the third London Edition, revised and enlarged, with 145 illustrations; pp. 490. Philadelphia: Lindsay & Blakiston. Detroit: E. B. Smith & Co.

This is another of the many valuable books which have recently enriched the department of medicine to which they are devoted. Certainly the obstetricians have recently given ample evidence that they are busily at work in their department. Leishman, Schroeder, Playfair, Roberts and Meadows have followed each other in rapid succession, and most emphatically in the present instance, the last is not least. In some respects Dr. Meadows' work leads all the others. It is not to be expected that a book assuming the modest name of a "Manual" should go over the whole ground and treat of subjects *in extenso*,

and the fact that the one before us makes no pretension to doing this, but at the same time manages to give most that is new together with what is best of the old, constitutes its claims to the recognition and support of the profession. It is a work which must grow in favor with the class for whose perusal it is especially designed, the busy practitioners.

The author, in common with others who have lately written, holds to the view that a certain degree of motion takes place in the pelvic articulations during parturition. This view we judge is now being very generally adopted.

The chapter on the signs and symptoms of pregnancy is noteworthy on account of the simplicity and perspicacity with which the subject is treated. We are constrained to quote liberally from this chapter :

“ It may perhaps be said, without exaggeration, that there is hardly a branch of obstetric medicine which at times presents greater difficulties or is attended with more important consequences than the diagnosis of pregnancy. Its non-recognition may not only lead to results disastrous alike to mother and child, but a medical man may by his neglect become the unconscious instrument of a crime for which his moral nature shrinks with horror. On the other hand, in the case of the unmarried, he may, if mistaken in his diagnosis, cast a slur upon a spotless character, and by his dictum destroy a reputation upon which the maintenance of life depends.

“ Little need be said, then, to prove how necessary it is to have a correct appreciation of the various signs of pregnancy ; and hence the eagerness with which men have from time to time endeavored to discover some new and unfailing sign of this condition. It must be admitted, however, that of late years no great advance has been made in this direction ; and though many suggestions, of doubtful value in themselves, have been offered, we still in the main have to trust to a few signs, the value of which has been confirmed by years of experience. There have been various ways of considering this subject by variously arranging the symptoms under certain classes ; but

without stopping to discuss their advantages or otherwise, it seems to me that the most natural and convenient method will be to state briefly *what phenomena may be looked for with each succeeding month*, instead of considering each separate symptom as it occurs and is modified during the whole course of pregnancy.

"This arrangement will, I think, be of no small convenience to the student, and at the same time it will be easy of reference for the practitioner. As may be readily imagined, it is in the *early weeks* of pregnancy that the greatest difficulty of forming a correct opinion presents itself. In some cases there is absolutely nothing to excite suspicion of such condition, and the patient may only become aware of it when pregnancy is far advanced. This is especially apt to occur during lactation, and I have known abortion happen many times under these circumstances, caused probably by the sympathetic relations between the breast and the uterus. In other instances, no sooner has conception taken place than, sometimes even with a few hours, symptoms begin which at once attract attention, and force upon the patient's mind a conviction of her situation. Between these two extremes there is every shade of variety, from the smallest, almost imperceptible change, to a general disturbance of almost every function."

On page 115 the author gives a table from which the duration of pregnancy may be estimated. It is something new and deserves commendation. Dr. Meadows is much more conservative in the use of the forceps than is Dr. Playfair, but we do not mention this as a recommendation of his book. The stand which Dr. Playfair takes on this question is that which will ultimately triumph.

The work has some imperfections, and among them are notably the manner in which the important contributions lately made by American writers are ignored. For instance, there is no reference to Engelmann's researches into the development of the decidua, to Perry's work on extra extra-uterine pregnancy, nor to Thomas's important operation through the roof of the

vaginal wall for the removal of the ovum in tubal pregnancy. There is much, however, to counterbalance these omissions and we can heartily recommend the book.

A PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS. By ROBERTS BARTHOLOW, M. A., M. D., Prof. of Theory and Practice of Medicine, and of Clinical Medicine, and formerly Professor of Materia Medica and Therapeutics, in the Medical College of Ohio; Physician to the Hospital of the Good Samaritan, etc. — pp. 537. New York: D. Appleton & Co. Detroit: E. B. Smith & Co.

First, the mechanical execution of this book; it is faultless. The author in his preface attempts to answer the question which of all others, is apt first to suggest itself the moment a new work on this subject is announced: Do the necessities of the times demand it? He justly says that "to offer the medical profession a new treatise of Materia Medica and Therapeutics may appear to be a labor of supererogation." He claims, however, to have earned the right to address the profession on this subject. For several years a teacher, his experience in this direction has been supplemented by twenty-two years of clinical experience as a practitioner. Dr. Bartholow has certainly achieved considerable reputation as an original worker, and in a certain instance manifested a zeal which, while it may have been commendable, cannot be said to have been judicious. On the whole, we are inclined, even before reading his treatise, to acknowledge his claim to place another book in the market, and in the volume he presents he certainly very ably vindicates his claim to this privilege. He may not have completely proven the necessity for his book but the success which he has attained is a sufficient justification of his attempt to do so. His system of classification is different from that of other authors and we are inclined to regard it as an improvement; it is a forward step in this direction, but it has by no means overcome defects from which it will probably never be possible fully to separate a classification which must from the very nature of things be arbitrary. The treatise suggests to us a combination of Stille

and H. C. Wood. It is, however, free from the encyclopedic character of the former and enters less fully into the "physiological action" which makes the latter difficult and laborious. He recognizes within certain limits the principle on which the former is founded, viz: that experience should be the foundation of the therapeutical action of medicines, but is "convinced that the most certain requisitions to therapeutical knowledge must come through the physiological method" of the latter.

We take much pleasure in recommending the book. Its perusal will convince the reader that it supplies a want.

A MANUAL OF PERCUSSION AND AUSCULTATION, OF THE PHYSICAL DIAGNOSIS OF DISEASES OF THE LUNGS AND HEART AND OF THORACIC ANEURISM. By AUSTIN FLINT, M. D. Philadelphia: Henry C. Lea. Detroit: E. B. Smith & Co.

The work contains the substance of the lessons which Prof. Flint has for many years given, in connection with practical instruction in percussion and auscultation, to private classes composed of medical students and practitioners. It is enough to say concerning it that it is written and arranged in the author's inimitable style. Few men in this country know better the wants of the profession than does Prof. Flint, and few men have the confidence of the profession to such a degree. He has for many years given especial attention to the subject of which this little work treats, and this is a guarantee of its worth.

THE STUDENT'S GUIDE TO DENTAL ANATOMY AND SURGERY.
By HENRY SEWILL, Member of the Royal College of Surgeons and Scientists in Dental Surgery; Dentist to the West London Hospital, etc.; 200 pp. Philadelphia: Lindsay & Blakiston. Detroit: E. B. Smith & Co.

"No department of physiology or surgery has, of late years, made greater progress than that connected with the teeth." The aims which Dr. Sewill claims to have had in view in preparing this work were principally to avoid needless technicali-

ties and to facilitate the labors of the student. From our somewhat cursory perusal of the treatise we conclude he has succeeded most admirably. The necessity of a work of this kind must frequently be felt by such practitioners as are obliged to assume the duties which are now so largely relegated to the dentist.

*METEOROLOGICAL REPORT for October. C. HENRI LEONARD,
M.D., Observer for STATE BOARD OF HEALTH.*

BAROMETER.—Highest, 30.386 (on the 27th); lowest, 29.417 (on the 6th); range, .969; average, 29.917. The lowest average barometer in five years.

TEMPERATURE.—Highest, 72 (on the 21st and 31st); lowest, 24 (on the 15th); range, 48; greatest daily range, 26°, (on the 19th); average, 46.2. The lowest mean temperature of the last five Octobers. In '72, the mean was 49.1; in '73, 47.9; in '74, 51.3; in '75, 46.7. The highest temperature in the last five Octobers was in 1875; it registered then 78°. The lowest was also seen in that year, it being 22 degrees. This mean temperature was only $\frac{1}{2}$ of a degree lower than the mean of last October. The warmest day was the last one.

WINDS.—Prevailing direction, S. W.; (S. W. 9; W. S. W., 2; W. 4; N. W. 4; S. 3) last month it was East. Greatest velocity, 30 miles per hour; this was on the 6th and 9th; an increase of 6 miles over last month. Total number of miles traveled, 5,583, a gain of 1,096 miles over last month, and more than in the Octobers of '72 and '74, though several hundred miles less than in the Octobers of '73 and '75. At one observation, 7 A. M., of the 18th, there was a calm.

CLOUDS.—Clear days, 7; cloudy, 14; rain or snow, 20. A gain of one clear day, a loss of two cloudy over last month.

RAINFALL.—Greatest daily, 90; this was on the 23d; total for the month, 2.89 inches, an increase over last month, though the "drouth" has been much complained of, this has been, comparatively, a *wet*, you might say very wet October. The total precipitation in '72 was but 1.60 inches; in '73, 2.60; in '74, 0.78; in '75, an unusually wet month, 3.35 inches.

MOISTURE.—The day of greatest humidity corresponded with the day of highest temperature on the 31st: still, the absolute humidity of the 22d was greater than on the 20th and 21st, although the *mean* temperature of the 22d was several degrees lower than on the two other days. The absolute humidity of the 30th was almost as high as that of the 31st, though there was over 7 degrees difference in mean temperature. This is the first instance, this season I believe, that I have found the highest absolute humidity to correspond with the highest temperature.

OZONE.—Most present on the 26th. Showed 1 on the scale at morning and afternoon observation. Has been, comparatively, absent this month, "traces" only being mostly observed.

MISCELLANEOUS PHENOMENA.

A solar halo of 22° radius was observed at 2 P. M., on the 5th. The first *ice* of the season formed during the night of the 8th and 9th, it being $\frac{1}{4}$ inch in thickness. Frosts occurred on the 11th, 12th, 13th, 16th and 18th. Light snow on the morning of the 15th. Thunder storms on the 27th, 28th and 31st.

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DECEMBER, 1876.

Original Communications.

SCARLET FEVER—ITS CAUSATION. By DR. J. S. CAULKINS,
Thorneville, Michigan. A paper read before the St. Clair, Sanilac and
Lapeer Medical Society.

It is my theoretical belief, as was intimated in the explanatory note to my last paper, that the cause of scarlet fever is a fungus, whose spores are received into the human organism, and finding their appropriate nidus in the blood, develop and reproduce themselves there, in a manner similar to that in which the spores of the Torula, or yeast plant, develop and reproduce themselves, in their appropriate nidus, a solution of sugar; and, as that lively little speck of protoplasm works a change in the solution of sugar, so, probably, does the scarlet fever fungus work a corresponding change in the blood, which change constitutes the essential fact in scarlet fever.

Many observers have looked for this fungus in the blood of scarlet fever patients, and some claim to have discovered it, but

there is a discrepancy in their statements of what they have seen, some having found the rod-like and punctate Bacterium, and some the Micrococcus. This last, Thomas, in Ziemssen's Cyclo-pedia, inclines to believe to be the true scarlet fever fungus.

But aside from the discordanae of the results of observers, another consideration would lead us to believe this to be too hasty a conclusion, and that is this: suppose that perfect accordance existed among observers, and the presence of some one of the infusoria in the blood were demonstrated to exist in every case of the disease, still that fact alone would prove nothing, for it would need further observations to show whether the relation was one of cause, or one merely of effect.

Whatever, then, the future may reveal to us, we must conclude that as yet, the scarlet fever fungus has not been identified and that its existence is merely a hypothetical one; but it challenges our belief, nevertheless, for the same reason that some other hypotheses do, namely, that it better explains facts and phenomena than any other theory. We believe, almost implicitly, in the atomic theory, and the existence of the ultimate molecule of matter; we believe in the undulatory theory of light and the existence of the luminiferous ether, but molecule and ether are as hypothetical as the scarlet fever fungus.

We look with great hope toward the future, and await with open mouthed expectation its discoveries, and it may be that the time will soon come when this, at present hypothetical fungus, will be known and described, and all its relations to the human organism investigated; but *it may never be*. It may be really hyper-microscopical—beyond the reach of our most powerful instruments, and all the improvements that the future can make in them. This need not startle us. We have no particular warrant for believing that the limits of our senses are the limits of life and organization. They may extend, and doubtless do, far beyond the reach of our most powerful instruments, down toward the ultimate molecule of matter itself, as compared with which, the smallest speck the microscope shows us, would be something immense. If we should say like a haystack compared

with a top thimble, it would be a feeble and remote approximation to the truth. If we should say, like the dome of St. Peter's compared to the same object, perhaps it would be no exaggeration. If, then, the particles of unorganized matter are so minute, that we might count them all day and still have a mass too small to be visible, why may not organized matter be correspondingly minute? Protoplasm is only carbon, oxygen, hydrogen and nitrogen, with a trace of sulphur and phosphorus, and the vital force, whatever that is, superadded. It may be then that the fungi that cause the true exanthems, are so minute that they may always elude our search, but we hope to the contrary; that the time will soon come when they will all be known and studied.

Let this be as it may, it is highly probable that the changes produced in the blood by the fungi, analogous to those produced in the solution of sugar, by the *Torula*, are tangible, and search should be made for them, as well as for the fungi themselves. This is a direction in which no one has yet traveled, and a rich field awaits the researches of the future explorer.

Before anything is done in this line of inquiry, some laborious study of the blood is needed and will have to be done, to clear the way before it, and elucidate the much that is unknown, especially with regard to the chemistry of the blood and its teleology, for there are in it substances whose origin and use are unknown.

It would not be worth our while in this state of ignorance, to spend much time in conjecture as to what the change is, that the scarlet fever fungus works in the blood; but of one thing I believe we may be positive, and analogy makes us bold in asserting it. We may be positive that a *poison*, a *toxic substance*, probably gaseous, is generated in the blood by the decomposition of some ingredient in it, through the action of the fungus, in an analogous manner to that in which the poisonous carbonic dioxide is generated in the solution of sugar, through the action of the *Torula* or yeast plant.

No doubt it is this toxic matter that poisons the brain, and causes the fatal result in that class of scarlet fever cases that die

in the first stages of the disease, without *appreciable* lesions sufficient to cause death, but from some profoundly lethal change. We are in the habit of saying of such cases, that they sink under the violence of the attack. As Flint says, speaking of cases that die before the eruption or pharyngeal redness becomes apparent "the vital forces seem to be overwhelmed." Such phraseologies are circumlocutions whose real equivalence is, that there is a cause at work, of whose conditions we are ignorant. Again, we are apt to refer such cases, especially if attended with convulsions, to uræmia, but this which adequately explains the convulsions which occur during the sequel of scarlet fever, is an inadequate explanation of those which occur during the first stages, for death takes place too quickly in some cases, and in others in which life lasts longer, there may be at most only partial suppression. There is not such an intolerance of the presence of urea in the blood, that all these explosive effects can be attributed to that. There must be some other cause, and what more probable can be thought of, if we accept the fermentation theory, than the one that has been assigned.

Scarlet fever, in many cases, has a sequel in inflammation of the tubules of the kidneys, accompanied by albuminuria and dropsy. The old writers used to attribute this result to exposure to cold of the tender new cuticle, and say that its severity was in proportion to the amount of desquamation. I have never noticed any such correspondence between desquamation and the renal difficulty, and doubt if any of you have. As for the "taking cold" theory, there was never any proof of it, and it seems to have been one of those convenient periphrases, by the use of which we hide our real ignorance from the laity, and ourselves too.

Flint says, speaking of this, and his acute and suggestive remark points us to the road we should take: "It is more rational to consider the renal affection which follows scarlatina, as a special effect of the latter, than to attribute its production to cold or other causes, acting after the scarlatinous poison has ceased to act." A special effect must have a special cause, and

the above remark must mean that the scarlatinous poison having ceased to act, left behind it a special cause that produced the special effect.

Following up this hint, and the chain of analogical reasoning that has guided us so far, light breaks upon us, and we see by its aid what produced the cause, that produced the special effect spoken of, viz.: the scarlatinous nephritis. We see at the first glance that it is another of the products of fermentation.

In the fermentation caused by the yeast plant, or by any other fungus, the substance fermented is split up into several products, one of which at least will be gaseous, tending to escape into the atmosphere, while others will be fluid and remain in solution.

For instance, in yeast or alcoholic fermentation, the sugar is split up into carbon dioxide, alcohol, succinic acid and glycerine. The dioxide escapes into the atmosphere, while the others, with the fungus itself, which multiplies immensely, remain behind in the menstruum.

We have already presumed that in the fermentation in the blood caused by the scarlet fever fungus, some one of its ingredients was split up, and some poisonous volatile substance was produced, which caused the fatal result when death took place early in the disease, we now presume that other less volatile products are left behind in the blood and circulating with it through the kidneys, are secured by them from it, and in their passage give rise by their irritant properties to the inflammation of the tubules. Here is another line of histo-research for the coming man. Let him find what these irritant substances are, that cause the nephritis.

Is there any harm, mechanical or irritant, caused by the presence merely of the fungi in the blood? It may be presumed that, if they work no change, they might come and go without disturbance, provided that their size did not hinder them from freely passing through the capillaries; but this proviso may not hold good. After the proliferating process is finished, the aggregated masses

may be so large as to block up the smaller capillaries, and be the cause of the efflorescence. The history of the fermentative process shows us that after developement ceases, the fungi settle at the bottom of the vessel ; and the capillaries may be viewed at the bottom of the vascular cone.

It is an objection to this theory of efflorescence, that it supposes such a great amount of material in the yield of fungi, but its force is diminished if we reflect ; that after a plug of fungi has produced a congested spot in one place it may be driven, by the *vis a tergo* of the blood, through into the veins, to repeat its work an indefinite number of times. How, then, will the morbid process come to an end, and the system be cleared of the intruders? The answer is that the squeezing through process would soon disintegrate the aggregated masses of fungi, and what the lungs could not exhale into the atmosphere, would go to share the fate of the fibrin of the blood, to the composition of which they must be closely allied, which fate probably is to be turned to urea in the kidneys.

The composition of the blood lends credibility to the germ theory of the zymotic exanthems, and fits it for a cultivating fluid for infusoria. It is sweet and saline, and experience shows that every fungus that acts as a ferment, thrives in such fluids.

There is reason, then, to believe that the blood would support fermentation, if any spores could find access to it, for which it would be the appropriate nidus ; nor is there reason to believe that there is any vital force or principle resident in it that can resist fermentation, or that its circulation would hinder it. It is probable that the blood, inside of its vessels, obeys the physical and chemical laws, like any other fluid, and will ferment as readily under the proper conditions *there*, as it will after having drawn from

the veins. Of course, conditions in the two cases would vary. The idea of a vital force formerly pervaded physiology, to a much greater extent than at present. Many phenomena that are now explained by the known laws of Physics and Chemistry, were once called "vital," and it was thought to be a good explanation of anything yet undiscovered to give it that epithet, as it certainly was, and is yet, a very convenient one. As science has advanced "vital" phenomena have receded, and shrunk into smaller compass. This is because effects believed to be vital are proved to be physical,

"Only that and nothing more."

It is not that we are able to give any better definition of life than our predecessors could. It is still for us, as for them, what Victor Hugo calls "that unknown thing." With us, as with them, it is all that the known laws of Physics and Chemistry cannot explain. We still have our class of vital phenomena, whose boundary is exactly coincident with that of our knowledge of physical law, and whose province lies just beyond. Among them is reckoned the power, shown by some, of resisting the invasion of disease, as when one or two of a large family get the scarlet fever, and the rest escape.

It may be presumed that such cases, when well understood, will be found to be the results of purely physical causes. Undoubtedly the reason why one fails to take, while another takes a zymotic disease, is that in the case of exemption the germs of the disease do not grow, for want of the necessary conditions. Of course we admit our complete ignorance of these conditions, but to attribute the result to a vital force in the exempted that resists the attack of the germs, is like attributing the failure of seeds to grow, when planted in the earth under inappropriate

conditions, to a vital force in the earth, that forbids their germination.

It may appear to you that this paper is irrelevant to the question raised in my last, as to whether scarlet fever always originates from a *contagium vivum*, but the irrelevancy is only apparent, its bearing on that point is direct. The careful student of the processes of nature sees, that she never does the same thing in two totally diverse ways. She sometimes does the same thing in different ways, but these different ways, are variations of the same way to suit circumstances. The variations never travel out of a certain bound.

Take for an illustration of this, the beginning of life, cell proliferation. We find that cells are developed in several ways. There is segmentation, budding, and the so called "free cell development." Looking closer, we find these differing processes are variations of one general plan, which is, that every cell is developed around a nucleus. In segmentations each compartment has its nucleus, in budding, each bud has its nucleus, and in free cell development, every cell is formed around a pre-existing nucleus. In cell development the nucleus is the fundamental, the variations are to suit circumstances. Free cell development is only reached in animal life, in vegetable physiology, development is always endogenous. In scarlet fever the spore is the fundamental. It may have different ways of getting access to the human system, be taken on the spot of its origin, or at a distance where transported, or be inoculated either in blood, epidermic scales or secretions, but looking at the uniformity of the process of Nature, the probability is reduced to its lowest terms, that it ever originates in but one way, viz. proliferation in its own appropriate *nidus*, the blood of the infected.

What will be the future treatment of Scarlet Fever and its kindred Zymotic diseases? I will close this paper with a conjecture concerning it, which you will perhaps say harmonizes well, for wildness of my conjectures, with the rest. It seems not unreasonable to hope, nor difficult to believe, that the *time*

will come, when these diseases will be treated with specifics, disinfectant agents, to kill the spores before they proliferate. *

It is certain that some such agent exists in the atmosphere, that kills them very soon after getting admission into it. If you go close to, say 5 feet from, a person in the open air having the measles, you will, if unprotected, catch them, if you keep 20 feet away, you may run some risk, if 100 feet none at all. Some will say, that the virus is too much diluted to cause the disease, but that cannot be the right explanation. It is certainly destroyed for one spore of a fungus, with vitality unimpaired is enough to start proliferation, when it reaches its appropriate nidus. * *

The most probable supposition is, that this atmosphere, spore killing agent, is either ozone or sunlight, for the apparent exceptions to this, where the viability of the scarlet fever spore is maintained for a considerable length of time, take place in rooms, where ozone and sunlight are deficient. The history of the late epidemic of small pox in Philadelphia, lends further probability to this, for the mortality diminished, and the epidemic abated, as the days grew longer.

Perhaps both agents have their part in the result, for according to Kedzie, ozone is formed, whenever sunlight falls on moist oxidable matter.

This makes heat a third factor in the product. Heat furnishes the necessary moisture, sunlight generates the ozone, and ozone oxydises the putrifacient matter. It accounts, too, for the greater intensity of the zymotic poisons in the winter. It is not for the lack of ozone, but for the lack of the necessary moisture to enable it to act. It gives us, too, some hints for the sick room—to keep the air sufficiently moist, and not to entirely exclude the sunlight.

* Observe here to what wide apart conclusions, the two theories of zymotic disease conduct their respective adherents. While the believers in the physiological or "germ" theory are looking for a germicide, the believers in the chemical theory must be looking for a chemical antidote, and would seem to have the most difficult task. An efficient germicide might be found, while yet in ignorance of the nature of the germs to be killed, but an antidote presupposes an intimate acquaintance with the nature of the thing to be antidoted.

* * This is Huxley's explicit statement.

The most that as yet been attempted in the direction of antiseptic treatment of the zymotic diseases, is the administration of sulphurous acid, in the form of the bisulphites, after the plan of the Italian Prof. Polli. His report of his success is good, I have myself, fed them to six cases of small pox and a few cases of whooping cough, and with apparent success, at least the cases all made good recoveries.

Perhaps it is to ozone in some shape that we must look for the internal germicide of the future, either by way of inhalation if some way can be found to avoid its irritant effects on the air passages, or by injection into the blood, if some solvent sufficiently bland for that purpose can be found, and at the same time capable of absorbing it in sufficient quantities for an efficient germicide, if indeed future researches should show that solutions of ozone have germicide properties. In pure water ozone is soluble to the amount of only about one half of one per cent. Experiments are needed to learn whether such a solution will kill the yeast plant, and if so, whether it can be safely injected into the veins of living animals.

These three propositions seem to be fairly deducible from what has been said above.

1st. The germ theory of scarlet fever and its kindred, as understood in this paper, is not proved, but probable.

2nd. It is illogical to believe that a disease can be contagious and non-contagious. Scarlet fever is contagious, and has its sole cause in a contagium generated within the organism of the infected.

3d. If the germ theory be true, it is a fact of prime importance to humanity, and contains a promise for the future, for if these germs, these invisible but formidable enemies are *alive*, it is impossible that the ingenuity and industry of the future will not find some way to kill them, before they do their evil work, and thus, eventually the whole Pandora's box may disappear from the earth.

Chemistry and Pharmacy.

IN CHARGE OF PROF. ALBERT B. PRESCOTT, OF THE UNIVERSITY OF MICHIGAN.

THE VALUE OF CARBOLATED MIXTURES.

The liquid preparations known as "phenol-sodique," and the solids sold as "carbolate of lime," (slightly soluble in water), are well known to be mixtures—not chemical compounds. As mixtures, they can be made in any desired proportions, within due limits, and made any where with the utmost ease. Carbolic acid dissolves in liquor sodae, as readily as castor oil does in alcohol. Solution of sodium or potassium carbonate dissolves carbolic acid but sparingly, though quickly with help of heat, the solution saturated hot precipitating as it cools.

The following proportions have been recommended: Crystallized carbolic acid, 188 grains; caustic soda, 31 grains; water, 4 fluid ounces. Another: Crystallized carbolic acid, 5 parts; solution of soda of spec. grav., 1.33 (about 11 per cent. of sodium oxide), 1 part; water, 4 parts.

The following valuations of certain carbolated mixtures in use have been made.*

1. "*Phenol Sodique.*" (Retailed at \$1.00 per pint.) Solution dark brown to black. Eleven per cent. of pure carbolic acid (phenol). The remainder is ordinary commercial caustic soda, with water.

2. "*Bellevue Carbolate of Lime.*" A light pink powder. Twenty-one per cent. of carbolic acid.

3. "*Carbolate of Lime.*" Twenty-six per cent. carbolic acid.

4. "*Carbolated Powder.*" Seven per cent. carbolic acid, with much tarry matter, evidently from crude carbolic acid.

*Taken from a detailed report by Jeremiah Coughlin, Ph. C., on file at the School of Pharmacy of the University of Michigan.

EXAMINATION OF CHLOROFORM. By GEORGE GUNDRUM, Ph. C.***TESTS DIRECTED BY THE PHARMACOPÆIA FOR COMMERCIAL PURPOSES.**

- a. A colorless liquid.
- b. Sp. Gr. from 1.45 to 1.49.
- c. Shaken with an equal volume of officinal sulphuric acid in a bottle closed with a glass stopper, it forms a mixture, which separates by rest into two layers; the upper one colorless, and the lower, consisting of the acid, of a brownish hue, which, after the lapse of twenty-four hours, becomes darker, but never quite black.

TESTS DIRECTED BY THE PHARMACOPÆIA FOR PURIFIED CHLOROFORM.

1. A colorless volatile liquid, not inflammable, of a bland ethereal odor and hot aromatic saccharine taste.
2. Its Sp. Gr. is 1.48.
3. It boils at 142° F.
4. It is slightly soluble in water, and freely soluble in ether or alcohol.
5. When shaken with an equal volume of sulphuric acid, in a bottle closed by a glass stopper, and allowed to remain in contact for twenty-four hours, no color is imparted to either.
6. When a fluid drachm is evaporated spontaneously with one drop of neutral aqueous solution of litmus, the color of the latter is not reddened.
7. The result of the test is the same, if the chloroform, contained in a white glass bottle, has been previously exposed to direct sunlight for ten hours.

TESTS DIRECTED BY THE PHARMACOPÆIA GERMANICA FOR CHLOROFORM.

- x. Distilled water shaken with chloroform must not change test paper.

*From a report of work done at the School of Pharmacy, University of Michigan
in April, 1876.

- y. Distilled water shaken with chloroform must not be rendered turbid by nitrate of silver.
- z. When chloroform is dropped into a solution of iodide of potassium, made with twenty times its weight of distilled water, the solution must not burn red.
- d, "Any free chlorine is made evident by potassium iodide and starch."†

THE EXAMINATION OF NO 1. "PURE CHLOROFORM."

- 1. Correct.
- 2. Sp. Gr. 1.49.
- 3. Boils at 143° F.
- 4, 5, 6 and 7. Fulfils the requirements.
- x. Is not affected.
- y. Solution of nitrate of silver is very slightly affected.
- z. Not affected.
- d. Not affected.

NO. 2. "COMMERCIAL CHLOROFORM."

- a. Correct.
- b. Sp. Gr. 1.49.
- c. Changed to a light yellow and does not turn darker, even after a week.
- 3. Boils at 143° F.
- 6. Is not turned red.
- 7. Not tested.
- x. Is not affected.
- y. Solution of nitrate of silver is precipitated.
- z. Is not affected.
- d. Is not affected.

NO. 3. "COMMERCIAL CHLOROFORM." (McKESSON & ROBBINS.)

- a. Correct.
- b. Sp. Gr. 1.474.†

†Prescott's Outlines of Proximate Organic Analysis.

- c. Is changed to a light yellow.
- 3. Boils at 144° F.
- 6. Remains blue.
- 7. Not tested.
- x. Neutral.
- y. Solution of nitrate of silver is precipitated.
- z. Is not affected.
- d. Is not affected.

NO. 4. "COMMERCIAL CHLOROFORM."

- a. Slightly milky.
- b. Sp. Gr. 1.495.
- c. Is not colored in the least, even after a week.
- 3. Boils at 142° F.
- 6. Is turned red.
- x. Is reddened.
- y. Nitrate silver solution is precipitated.
- z. The chloroform forms a red layer at the bottom of the test tube.
- d. Forms a red layer below and a blue solution above.

NO. 5. "COMMERCIAL CHLOROFORM."

- a. Correct.
- b. Sp. Gr. 149.
- c. Colored very slightly.
- 3. Boils at 141° F.
- 6. Is not reddened.
- x. Is not affected.
- y. Is not affected.
- z. Is not affected.
- d. Is not affected.

RESULTS WITH THE IODOFORM TEST FOR ALCOHOL. †

No. 1, 2 and 3 gave iodoform that could be plainly seen

† To a half fluid drachm of the liquid tested, add 5 or 6 drops of a ten per cent. potassa solution (or of liquor potassae); warm to 212° or 248° F., and add, of a solution of potassium' iodide in five parts of water then saturated with iodine, till the liquid is brownish yellow. Agitate, and if the color persists, add a drop or two of potassa solution. Set aside for half an hour.

under the microscope in hexagonal stars. No. 4 showed no iodoform until evaporated to dryness, and then they were more or less complete hexagons with cubes and rectangles intermixed. No. 5 did not give complete stars, but hexagons more or less advanced between hexagons and stars. In the bottom of the test could be seen precipitates with each sample except No. 4. Alcohol, it will be remembered, in proportion of about one-half per cent., is a pharmacopœial constituent of purified chloroform; its excess being forbidden by the required specific gravity.

PRECIPITATED⁸ SULPHUR, AGAIN.

In a letter from Prof. H. M. Crofts, of University College, Toronto,—referring to our report of the valuation of “lac sulphuris” (page 684 of this volume)—he mentions having recently analyzed a sample that gave only 38.4 per cent. of sulphur.

Ars, ante omnia veritas.



VALEDICTORY.

The present number, which closes the present volume, closes also the present existence of the PENINSULAR JOURNAL OF MEDICINE. From this date it will be classed with the things which were but are not. It was urged upon its managers that a consolidation with the *Detroit Review of Medicine and Pharmacy* to form a new journal, would be to the best interests of the profession, and when they looked over their list of promises to pay and plausible but unfulfilled pledges of support from avowed friends, they were convinced that their own individual pecuniary interests would not suffer to any appreciable extent by such a consolidation, and they listened to the voice of the urgers. From this date therefore the journals heretofore published in this city will be merged into the DETROIT MEDICAL JOURNAL, which will be published under the auspices of the Detroit Medi-

cal and Library Association. The January number of the new journal will be sent to the subscribers of both the old journals, and it is sincerely hoped that the patronage extended to these will be continued to their successor.

The wisdom of the publishers of the old journals in making these arrangements will not, we think, be questioned. Although numerous enough and sufficiently capable in all respects to keep alive and in vigorous health two medical journals, the profession in this State have never yet done so.

The DETROIT MEDICAL JOURNAL will carefully eschew all questions whose tendency is to stir up discord in the ranks and to divert the minds of its readers from the more legitimate and strictly professional interests of the profession. Its policy on all local questions will, we think, give satisfaction to all fair minded and unprejudiced men.

In bidding adieu to its patrons the PENINSULAR JOURNAL would be sadly wanting not only in courtesy but also in gratitude did it fail to return its heartfelt thanks to those who have so zealously and with such kindly feeling followed its fortunes. We shall ever treasure the remembrance of our relations to the profession through this journal with grateful feelings and associate the acquaintance thus made with the most pleasant memories of the past.

THE smallness of the present number is unavoidable. A press of professional work together with the time spent on the coming new journal has prevented our preparing more matter for this journal. We ask therefore to be excused for this shortcoming.

PUBLISHER'S NOTICE.

The publishers of the PENINSULAR JOURNAL have a parting word to delinquents. Notwithstanding their most respectful and beseeching appeals for what is lawfully their own, much yet remains due them on subscriptions. Let it now be understood that all accounts remaining unpaid on the 20th of January will be placed in the hands of an attorney for collection.

